

DOCUMENT RESUME

ED 452 681

EF 005 906

TITLE Arts Education Facilities Planner for Grades 9-12.
INSTITUTION North Carolina State Dept. of Public Instruction, Raleigh.
Div. of School Support.
PUB DATE 2000-11-00
NOTE 83p.; Contributions by Roger Ballard, Bryar Cogle, David Edwards, and Preston Hancock. Supplement to the "North Carolina Public Schools Facilities Guidelines." Some figures may not reproduce well.
AVAILABLE FROM For full text: <http://www.schoolclearinghouse.org>.
PUB TYPE Guides - Non-Classroom (055)
EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Classroom Design; *Educational Facilities Design; *Educational Facilities Planning; *Fine Arts; High Schools; Public Schools
IDENTIFIERS North Carolina

ABSTRACT

This document suggests facilities necessary to conduct instruction in arts programs in grades 9-12 and conveys essential features that should be present. As a reference document for school facilities designers, it describes arts education programs and the facilities that support them, with some sections focusing on the concepts and features common to most or all arts education subject areas, and others describing requirements peculiar to the individual areas of dance, music, theater arts, and visual arts. Sample floors are also provided and generally represent the top end of the facilities spectrum and reflect spaces that are ideal for maximum implementation of the standard state course of study. Appendices contain arts education program descriptions; the cubic volume for choral and instrumental music rooms; design issues for a comprehensive music education delivery system at the high school level; and sample plans for dance, general music, choral music, instrumental music, electronic keyboard lab, theater arts classroom, black box arena, theater arts laboratory/auditoriums, visual arts classroom/studio, and the photography lab. Additional resources are included. (GR)

dance
music

Arts Education Facilities Planner

theatre arts
visual arts

EF 005 906

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Grades 9-12

Published November 2000



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State Board of Education
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ARTS EDUCATION FACILITIES PLANNER
FOR GRADES 9-12

FOREWORD

Arts education is a collective term that denotes instruction and learning in four separately distinct subject areas--dance, music, theatre arts, and visual arts. Each is a unique but integral component of the *North Carolina Standard Course of Study* for kindergarten through grade twelve. Facilities that effectively support arts education curricula must interrelate with overall school design while addressing the unconventional requirements of laboratory-oriented instruction. Much of the study, learning, and practicum for arts education necessitates peculiar environmental considerations and results in performance or display of an art product. Instructional spaces should be designed and equipped to promote each type of teaching and learning and to provide maximum safety for students during the arts process.

This document suggests facilities necessary to conduct instruction in the four arts programs in grades 9-12 and conveys essential features that should be present. It is a supplement to the *North Carolina Public Schools Facilities Guidelines* and is a resource to assist design professionals to plan arts education facilities that meet the needs of and complement dance, music, theatre arts, and visual arts programs in North Carolina's public schools. We hope you find it useful.

Phillip J. Kirk, Jr.

Phillip J. Kirk, Jr., Chair
State Board of Education

Michael E. Ward

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North Carolina Department of Public Instruction

ACKNOWLEDGMENTS

The Department of Public Instruction gratefully acknowledges the contributions of the following, without which the development of this publication would have been difficult.

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North Carolina Music Educators Association, Inc.

North Carolina Theatre Arts Educators

Wenger Corporation, Owatonna, MN. (1)

(1) Much of the material and many of the illustrations included in the Sound Management, Sound Isolation, and Acoustical Design sections of this publication and in the Cubic Volume for Choral and Instrumental Music Rooms, Acoustics, Storage, Traffic Flow, Security, and Equipment sections of the Appendix are based upon the *Planning Guide for Secondary School Facilities*, 1997, published by the Wenger Corporation of Owatonna, Minnesota. This information is included by permission of the Wenger Corporation.

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INTRODUCTION

BACKGROUND AND OVERVIEW

The arts have been a part of life from the very beginning. They have defined, described, and deepened the human experience and have been an inseparable part of the human journey. All people have an abiding need for meaning--to connect time and space, experience and event, body and spirit, intellect and emotion. Art is created to make these connections--to express the inexpressible--and to connect each new generation to those that have gone before.

Many factors impact arts education programs in a high school. The demand for and extent of facilities for the arts should be a collective decision among design professionals, school staff and administrators, community representatives, and others who share interest in their development and use. To design optimum facilities for arts education instruction, it is helpful to have some fundamental knowledge about how programs are defined and prescribed for the public schools in North Carolina. Preconceived notions about arts education programs may not accurately correlate with the intent of formal programs of study. In order to effectively collaborate with school personnel and make informed design choices and decisions, the designer should possess a basic sense of what arts education comprises and of what an education in the arts achieves, in relation to student learning.

Study and instruction in the arts occur in traditional and non-traditional ways. In order for learning to be followed by practical application, arts education programs often require non-traditional spaces with non-traditional features. Examples include stages with theatrical lighting and dance studios with resilient floors. Much of the rationale for the scope and design of arts facilities should stem from a clear understanding of the potential of arts education programs and the realities of the programs that will be delivered at the school for which the design is being created. The following provides insight into instruction and learning that should take place in the completed facility.

ABOUT ARTS EDUCATION

Each student, regardless of background, talent, or disabilities, deserves access to the rich education and understanding that the arts provide. In an increasingly technological society overloaded with sensory data, the ability to perceive, interpret and evaluate such stimuli is critical. The arts can help the student develop multiple capabilities for understanding and deciphering an image- and symbol-laden world, and should be considered an integral part of all general education.

The *North Carolina Standard Course of Study* identifies what students in grades K-12 should know and be able to do as a result of a comprehensive arts education. By involving the "whole" child, the arts gradually teach literacy while developing intuition, sensitivity, reasoning, imagination, and dexterity.

Society benefits because the student gains powerful tools for understanding human experiences, both past and present, by:

- collaborating and working in teams;
- making decisions creatively, where no prescribed answers exist;
- learning to respect and adapt to diverse ways of thinking, working, and expressing;
- learning problem recognition and solving involving expressive, analytical, and developmental tools in every situation;
- understanding the influence of the arts and their power to create and reflect on cultures;
- developing the essential senses of sight, hearing, smell, taste, touch, and kinesthetics as intellectual, emotional, physical, creative, and expressive acts;
- analyzing non-verbal communication and making informed judgments about cultural products and issues; and
- communicating effectively.

Concepts critical to arts education which directly influence facilities design include:

- The comprehensive program is a sequenced learning experience across four arts disciplines.
- The arts require focused time for sequential study, reflection, and practice.
- Instruction in the arts must occur through a hands-on orientation.
- Arts education should promote interdisciplinary study and integration among and across the arts and other disciplines.
- Technology should enhance the student's ability to synthesize, integrate, and construct new meanings from a wealth of resources and information.

USING THE PLANNER

This publication is a reference document for school facilities designers. It describes arts education programs and the facilities that support them. It is neither comprehensive nor all-inclusive, but provides an initial understanding of the nature and purposes of arts education programs around which facility designs evolve. The planning guidelines in no way supersede state or local codes or regulations, nor do they replace federal or state legislation regarding building design and construction, access, safety, or other pertinent issues.

Various sections of this document focus on concepts and features common to most or all arts education subject areas, while others describe requirements peculiar to the individual areas of dance, music, theatre arts, and visual arts. Sample floor plans generally represent the top end of the facilities spectrum and reflect spaces that are ideal for maximum implementation of the standard state course of study. They serve to supplement and clarify written descriptions and are not intended for direct replication within facility designs. Actual facilities designs will relate to the present and anticipated program needs determined by the owner.

As a design takes shape, it is likely that additional, more detailed information will be needed about programs, equipment, and purposes that will function within a facility. A number of publications are listed in the *Additional Resources* section of this planner. In addition, staff consultants with the Arts Education and Healthful Living Section of the North Carolina Department of Public Instruction are available to discuss areas of concern and may be contacted by phone at (919) 807-3856 (dance or music) and (919) 807-3855 (theatre arts or visual arts).

COMMON FACILITIES ELEMENTS

Designing school facilities challenges the collective planning skills and creativity of educators and design professionals. Providing desirable arts education learning environments for the myriad of instructional processes and exhibits introduces particularly complex issues into the collaboration. At least three characteristics unique to arts education facilities emphasize the importance of good design decisions.

The high cost of space and equipment, compared to that of regular academic teaching stations in a school The required volumes of space for some laboratories, performance spaces, and exhibit areas, and storage areas for teaching supplies, production materials, and technical equipment often exceed those for academic teaching stations. Furthermore, equipment costs for these spaces are almost always significantly greater because of the necessity for specialized sound, lighting, and technology.

The inflexibility of laboratory, performance, and exhibit spaces Inherent artistic, technical, and equipment requirements may often demand large, unobstructed spaces, high ceilings, special electrical, plumbing, and mechanical systems, non-traditional floors and floor coverings, and acoustical treatment. Such spaces might provide limited flexibility for other uses. Due to required noise control and public access, these spaces are often somewhat secluded from the remainder of the facility.

The location of facilities for the four program areas, both in relationship to one another and to the remainder of the school Facilities for the four instructional areas should be in proximity to promote collaborative efforts. However, individual spaces should be separated by corridors or sound-dampening walls so the considerable sound generated by performers' voices, musical instruments, power tools, or audiences does not carry into adjacent spaces used simultaneously throughout the school day and beyond. Movement resulting from class changes, rehearsals, performances, scenery construction, and visual arts processes and exhibits should be considered in determining the sizes and locations of doors, proximity of classroom, laboratory, and performance spaces, and noise and crowd management strategies.

This section identifies design considerations that are common to arts education facilities.

SOUND MANAGEMENT

The most important common design aspect for arts education facilities is sound management. Primary considerations are:

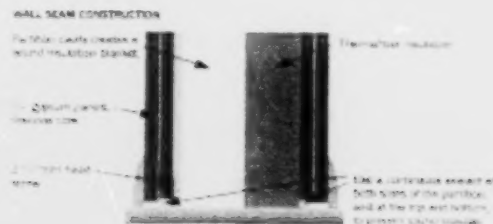
Sound isolation Sound is confined within desired spaces and not allowed to interfere with instruction in other areas.

Acoustical design Provision is made for the quality and control of sound.

SOUND ISOLATION

Good sound isolation is a result of effectively blocking the transmission of sound from one room to another. It is one of the surest and most cost-efficient methods of maximizing the investment in an arts education facility. The following basic principles should be adhered to.

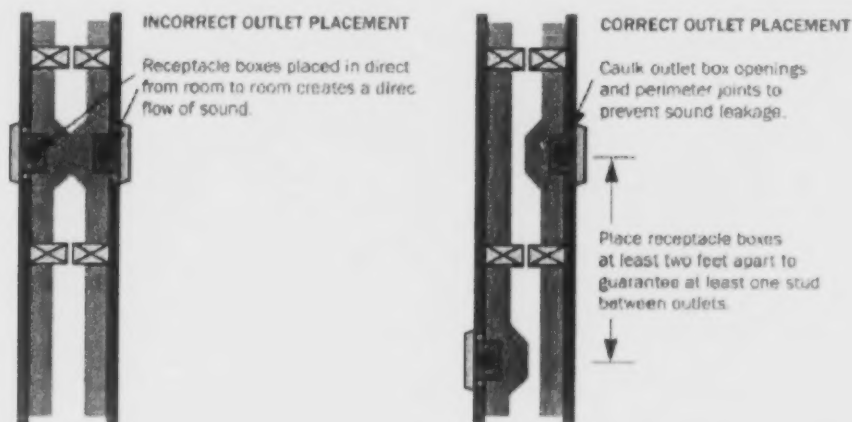
- Use full-height, sound insulating walls with airtight seals to the building structure at both floor and roof decking.
- Keep doors and windows to a minimum to reduce sound leakage.
- Specify doors and windows with acoustical ratings equal to the wall construction.
- Buffer zones, such as corridors and storage rooms, are better sound isolators than single walls.
- Wall seams are a common source of sound leakage. Sealed construction should be specified.



Courtesy Wenger Corporation

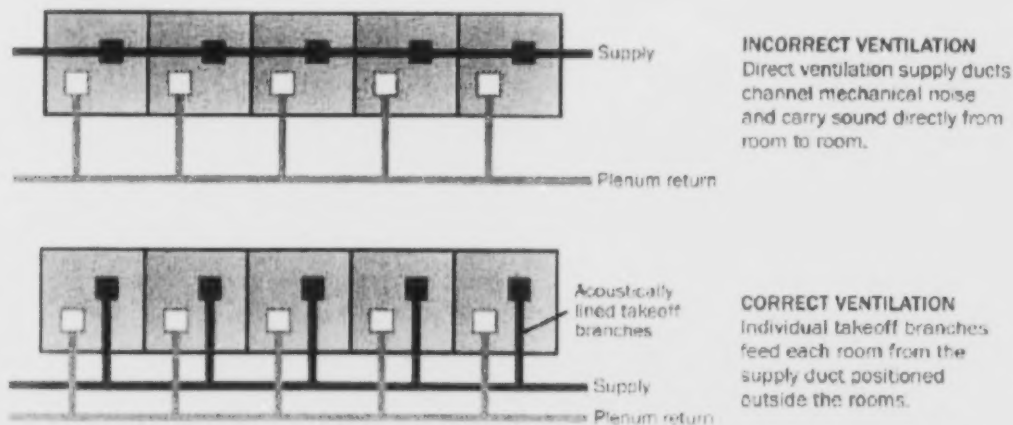
- Wall seams should be checked at roof deck, floor, electrical outlets, and ventilation ducts.

► Spaces that allow air to move from room to room also allow sound to move from room to room. An entire sound-isolated wall can be rendered ineffective by something as seemingly insignificant as a room-to-room electrical box or a gap as small as one square inch.



Courtesy Wenger Corporation

► Ventilation systems often serve to transfer sound between rooms. The most effective solution is to route acoustically lined take-off branches into each room from a supply source placed outside the rooms.



Courtesy Wenger Corporation

- Classrooms for the arts are physically active environments that require an air exchange rate greater than that of most other classrooms. Larger ducts and vents with larger grills should be employed to reduce noise caused by increased air volume and velocity.
- Mechanical systems often produce a variety of noises that interfere with instruction in the arts. Facilities plans should include specific procedures to minimize this interference.
- Mechanical equipment can cause vibration and should not be directly connected to the arts suite structure. It is imperative that the HVAC contractor provide low-vibration alternatives.
- Drinking fountains should be placed outside arts instruction rooms, where compressor noise will not prove a distraction.

ACOUSTICAL DESIGN

Effective acoustical design for facilities for the arts requires attention to two primary considerations: 1) room and wall shape and cubic volume; and 2) acoustical finishes on floors, walls, and ceilings. The following concepts should be considered.

Room and wall shape

- Untreated parallel walls cause flutter echo. This annoying ringing or buzzing sound can be corrected with acoustical treatments that diffuse and absorb sound. Non-parallel and splayed walls can reduce flutter echo, but these solutions cost significantly more per square foot than acoustical treatments. The money saved can be more effectively used for increasing volume, improving sound isolation, or installing better HVAC systems.
- Avoid visual acoustics. These are design features, such as curved walls and domes, that look attractive and appear to have good acoustical properties but are, in reality, detrimental to the acoustic environment.
- Parallel walls in square or cube-shaped rooms create additive wave lengths, called standing waves, that over-emphasize certain frequencies and make them abnormally loud. Creating a rectangular room by varying one dimension 30 percent or more is a typical solution.

Cubic volume

- Reducing cubic volume can make a room unresponsive and excessively loud, which may be impossible to totally correct.

Floor finishes

- Carpeting absorbs high frequency sounds. If carpet must be used, select thin industrial carpet that is nearly acoustically transparent.
- Wood or other hard-finish floors are preferable for flexibility, durability, and ease of maintenance.

Wall finishes

- Walls must be treated with an effective combination of absorber and diffuser panels.

Ceiling finishes

- Ceilings are the largest unencumbered square footages available for acoustical treatment. It is important to specify absorptive fiberglass, which is often identical in appearance to mineral board.

TEACHER WORK STATIONS

Each teacher should have a work station that comprises, as a minimum, an adequately lighted desk-height work surface with computer terminal and telephone, a chair, a lockable legal-size file cabinet for student records and another for instructional materials, and a large, lockable cabinet for the storage of teaching materials and personal items. Arts educators usually teach many different classes in a given day and storage for significant quantities of instructional materials and equipment is necessary.

In certain circumstances, particularly in high schools, teacher offices contiguous to teaching spaces may be warranted. Arts education teachers often supervise students who work independently throughout the school day and beyond or may have supervisory responsibilities for groups from the community that use facilities for the arts.

Where combined or shared teacher work stations are used in lieu of individual teacher offices for reasons of efficiency and flexibility, a best-case scenario will locate them in proximity to teaching spaces. As a design evolves, the owner and designer will determine the most feasible use of available space.

If teacher work stations are located in common areas and teacher "stations" provided within the classroom proper, separate work and conference space should be readily accessible. Work areas should be equipped with shelf space for books and other printed material and storage for audiovisuals and other teaching aids. One or more tables with chairs can contribute to the flexibility and utilization of the area. Teacher workrooms for the preparation of instructional materials should be located contiguous to the work stations area.

PERFORMANCE FACILITIES

Performance facilities are mentioned in the theatre arts section of this planner. In general, available performance facilities will be in continuous use for music, dance, and theatre arts. Multi-use facilities, such as gymnasium and cafeteriums, cannot adequately or equitably serve such programs, afford limited access, seldom have all the requisite furnishings and equipment, and are not recommended for arts education.

SMALL SCHOOLS

Renewed interest in the potential benefits of smaller schools has emerged pursuant to studies on school safety and order and student achievement. The facilities recommended in this publication present best-case scenarios that accommodate the *North Carolina Standard Course of Study* in its most comprehensive form and are consistent with current State Board of Education school size guidelines*.

Designing smaller schools entails more than proportionately reducing the size of various components within a facility. Requisite administrative and support elements require certain minimum amounts of space in order to function, regardless of the size of the instructional area. Likewise, some instructional spaces may be difficult to down-size (other than the *quantity* of regular classrooms) without compromising the quality of curriculum offerings. A major consideration in electing smaller schools may be establishing a reasonable balance between curriculum and facility issues--i.e. what are the boundaries of where program quality and facility size can meet to the best advantage of the student.

*(Current guidelines reflect effective and efficient school sizes and are predicated on comprehensive curriculum and program offerings and economy of facility construction, operation, and maintenance.)

ALTERNATIVE SETTINGS

Increased attention is being given the advantages of educational programs in alternative settings for some students. Where the greatest measure of academic success cannot, for a variety of reasons, be achieved in more traditional instructional settings, programs are being implemented in other--often non-traditional--settings, such as in separate school buildings, during alternative times of day and evening and on weekends, and in non-school community facilities.

It is important not to overlook the value of arts education in designing alternative curricula, especially at the high school level. Students often respond more positively to kinesthetic learning experiences than to tradition-bound teaching strategies. Some students who struggle within the regular classroom environment excel within less formally-structured venues that encourage individuality and creativity.

TEACHING FACILITIES

DANCE

Purpose: To develop for the student an understanding of the diverse ideas, beliefs, cultures, attitudes, and feelings of humankind throughout time, as communicated by movement.

Types of Instruction and Activities: Discussion; demonstration; small- and large-group activities; performance-sharing sessions

Space Requirements:

1. A minimum of 1,800-2,000 square feet and large enough to accommodate all students in a class moving at the same time. At least 90 square feet per student is desirable for dance activity space.
2. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.
3. An enclosed, secure computer center with a minimum of 160 square feet within or adjacent to the dance classroom, with infrastructure for phone and Internet access, is desirable. Ready access to a computer lab may constitute a minimum, although less desirable, alternative. Lockable storage for student technology work files should be provided. Six-eight computer stations should be provided.
4. Toilets and dressing spaces contiguous to the dance facility are desirable to accommodate quick changes into and out of dance apparel. Individual student lockers and lighted mirrors are desirable in these spaces.

Special Needs:

1. Sprung wood or resilient wood floors are desirable. Concrete, tile, wood-over-concrete, and wood-over-tile floors are not recommended due to the potential for injury from falls or repetitive jumping.
2. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts.

3. The physical nature of dance activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
4. Absorber and diffuser panels should be utilized to provide appropriate acoustical properties and a quiet environment. The facility is best located away from high-circulation areas and should be sound isolated from the rest of the school.
5. The room should be open throughout and clear of fixed furniture and casework. Outside wall corners should be rounded or bullnosed. The space should be designed to preclude distractions from other people or classes passing through.
6. Electrical outlets should be located on perimeter walls.
7. Track lighting should be provided and controlled by switches separate from those controlling regular overhead lighting.
8. Provision should be made for darkening the room for use of audiovisuals.
9. Shatter-proof mirrors should be mounted on at least one wall, with drapes installed to cover them when necessary. Wall-mounted barres should be provided.
10. Water fountains, for student rehydration after classroom activities, should be readily accessible but should not be located where overflow can spill onto wood flooring.

Typical Furniture:

1. Rolling costume cabinet
2. Audiovisual cart
3. Work table with chairs
4. Bookcases: Minimum of one (1); two (2) are desirable.
5. File cabinets: Minimum of one (1); three (3) are desirable.
6. Folding or stacking student chairs, with tablet arms, in sufficient numbers to accommodate largest class membership.

Typical Storage: Minimum of 100 square feet of secure storage space (200 square feet are desirable) for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials.

Costume storage with hanging racks and box storage shelves should be provided contiguous to the dance facility. A minimum of 350 square feet is desirable.

Typical Equipment:

1. Bulletin board for display of general information, dance concepts, photos, and student drawings
2. Minimum of one (1) white dry marker board; two (2) are desirable
3. Stereo CD/cassette unit with cuing function and wall-mounted speakers
4. Camcorder
5. Computer system
6. VCR and monitor

Sample Floor Plan:

See Page 60.

MUSIC

Purpose: To contribute in important ways to the quality of the student's life by developing perception, observation, communication, and the creative process.

Types of Instruction and Activities: Discussion; demonstration; small- and large-group activity; performances; sharing sessions

GENERAL MUSIC CLASSROOM:

Space Requirements:

1. Area: The space should be large enough to accommodate all students in a class moving, sometimes with instruments, at the same time--at least 30 square feet per student is desirable.
2. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Special Needs:

1. The physical nature of music activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
2. The room should be open throughout, with no fixed furniture or casework except along the perimeter. Outside corners within the room should be rounded or bullnosed.
3. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts.
4. Provision should be made for darkening the room for use of audiovisuals.
5. The facility should provide appropriate acoustical properties and a quiet environment.
6. Electrical outlets should be located on perimeter walls.
7. Convenient access to a water fountain should be provided.
8. The room should be acoustically isolated from the remainder of the school.

Typical Furniture:

1. Audiovisual cart
2. Work table with chairs
3. Bookcases: Minimum of one (1); two (2) are desirable
4. File cabinets: Minimum of one (1); three (3) are desirable
5. Folding or stacking student chairs, with tablet arms, in sufficient numbers to accommodate largest class membership

Typical Storage: Sufficient secured storage space (200 square feet is desirable) for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials and Orff instruments, such as bass xylophones and metallophones.

Typical Equipment:

1. Stereo cassette/CD player/recorder with wall-mounted speakers
2. Piano; electronic keyboard/synthesizer; camcorder; VCR with monitor; computers
3. Bulletin board for general information, instruction, photos, and student work
4. Cork strips with hooks and clips for poster display
5. Minimum of one (1) white dry-erase board; two (2) are desirable--one with permanent music staff lines and one plain

Sample Floor Plan:

See Page 61.

CHORAL MUSIC :

Types of Instruction and Activities: Similar to general music.

Space Requirements:

1. A minimum of from 1,000 to 1,500 square feet of floor space, with a ceiling height of at least 14 to 18 feet. This area will accommodate up to approximately 54 musicians. An additional 30-35 square feet is desirable for each additional vocal student beyond this range to accommodate the largest class membership. The total per-musician square footage is not equal to the footprint of a musician within the room. It is a means for calculating total additional room size for larger groups that takes into consideration additional space requirements such as aisles, storage, etc.
2. Enclosed office space with computer and phone access (80-100 square feet) is desirable for program administration and student consultation.

Special Needs:

1. The physical nature of choral music activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
2. The room should be open throughout, with no fixed furniture or casework except along the perimeter. Outside wall corners should be rounded or bullnosed.
3. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts
4. Provision should be made for darkening the room for use of audiovisuals.
5. Running water should be available.
6. Electrical outlets should be located on perimeter walls.
7. The facility should be treated with absorber and diffuser panels to provide appropriate acoustical properties and a quiet environment, and it should be acoustically isolated from the remainder of the school.
8. The floor should be flat. Permanent risers should not be considered.
9. A double set of entry doors enclosing an entry foyer is desirable for sound isolation. Walls should be non-parallel or acoustically treated and the room should have a sound transmission classification of at least STC50 for both interior and exterior walls and STC45 for doors and windows.
10. A water cooler for rehydration should be readily accessible, but should not be located where compressor noise will be a distraction.
11. Cubic volume is provided in the Appendix.

Typical Furniture:

1. Audiovisual cart
2. Work table with chairs
3. Bookcases: Minimum of one (1); two (2) are desirable

4. File cabinets: Minimum of one (1); three (3) are desirable
5. Folding or stackable student chairs with tablet arms in sufficient numbers to accommodate largest class membership
6. Racks for currently-studied music
7. Conductor stand
8. Portable choral risers

Typical Storage:

1. Sufficient secured storage space (200 square feet is desirable) with shelving for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials and Orff instruments (such as bass xylophones and metallophones).
2. A contiguous, lockable, environmentally controlled costume/robe storage room (200-250 square feet is desirable) with hanging racks and box storage shelves.
3. Secured shelving or lockers should be provided for both small and large accompaniment instruments.
4. A secured area should be provided, for the choral music library, that accommodates the sorting and compilation of music.

Typical Equipment:

1. Stereo cassette/CD player/recorder with wall-mounted speakers and suspended microphones placed for maximum stereo effect
2. Piano; electronic keyboard/synthesizer; camcorder; VCR with monitor; computers (Note: Computers may be located in the electronic keyboard laboratory if one is available; otherwise, they should be located in a secure area of the classroom.)
3. Bulletin board for general information, instruction, photos, and student work
4. Cork strips with hooks and clips for poster display
5. Minimum of one (1) white dry-erase board; two (2) are desirable--one with permanent music staff lines and one plain
6. Large mirrors should be mounted on at least one wall for immediate feedback on jaw and lip positions and facial expressions while singing and for posture and concert positioning. Drapes should be provided to cover the mirrors when not in use.

Sample Floor Plan:

See Page 62.

INSTRUMENTAL MUSIC (Band and Orchestra):

Types of Instruction and Activities: Similar to general music.

Space Requirements:

1. A minimum of from 1,600 to 1,800 square feet of floor space, with a ceiling height of at least 16 to 18 feet. This area will accommodate up to approximately 65 musicians. An additional 30-35 square feet is desirable for each additional instrumentalist beyond this range to accommodate the largest class membership. The total per-musician square footage is not equal to the footprint of a musician within the room. It is a means for calculating total additional room size for larger groups that takes into consideration additional space requirements such as aisles, storage, etc.

2. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Special Needs:

1. The physical nature of instrumental music activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.

2. The room should be open throughout, with no fixed furniture or casework except along the perimeter. Outside wall corners should be rounded or bullnosed.

3. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts.

4. Provision should be made for darkening the room for use of audiovisuals.

5. Running water should be available for instrument maintenance.

6. Electrical outlets should be located on perimeter walls.

7. The facility should be treated with absorber and diffuser panels to provide appropriate acoustical properties and a quiet environment, and it should be acoustically isolated from the remainder of the school.

8. The floor should be flat. Permanent risers should not be considered.

9. A double set of entry doors enclosing an entry foyer is desirable for sound isolation. Walls should be non-parallel or acoustically treated and the room should have a sound transmission classification of at least STC50 for both interior and exterior walls and STC45 for doors and windows.
10. A water cooler for rehydration should be readily accessible, but should not be located where compressor noise will be a distraction.
11. Space should be provided in an enclosed area outside the classroom for the maintenance and repair of instruments.
12. An oversized door to an outside loading dock should be provided for loading and unloading equipment.
13. Cubic volume is provided in the Appendix.

Typical Furniture:

1. Audiovisual cart
2. Work table with chairs
3. Bookcases: Minimum of one (1); two (2) are desirable
4. File cabinets: Minimum of one (1); three (3) are desirable
5. Folding or stackable student chairs with tablet arms in sufficient numbers to accommodate largest class membership
6. Racks for currently-studied music
7. Conductor podium with music stand

Typical Storage:

1. Secured shelving or lockers for storage of small and large instruments should be provided. Instrument storage along perimeter walls can provide additional flexibility in facility usage, relieve student traffic congestion often found in separate storage rooms at the beginning and end of classes, and provide easy visual access for the teacher.
2. For band programs, a secure, environmentally controlled uniform storage room (300 square feet is desirable) with hanging racks and box storage shelves should be provided, where appropriate, contiguous to the classroom.
3. Sufficient secured storage space (200 square feet is desirable) with shelving for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials and Orff instruments (such as bass xylophones and metallophones).

4. A secured area should be provided for the instrumental music library that accommodates the sorting and compilation of music scores and parts.

Typical Equipment:

1. Stereo cassette/CD player/recorder with wall-mounted speakers and suspended microphones placed for maximum stereo effect
2. Piano; electronic keyboard/synthesizer; camcorder; VCR with monitor; computers (Note: Computers may be located in the electronic keyboard laboratory if one is available; otherwise, they should be located in a secure area of the classroom.)
3. Bulletin board for general information, instruction, photos, and student work
4. Cork strips with hooks and clips for poster display
5. Minimum of one (1) white dry-erase board; two (2) are desirable--one with permanent music staff lines and one plain
6. Large mirrors should be mounted on at least one wall for immediate feedback on bow and instrument positions and for posture and concert positioning. Drapes should be provided to cover the mirrors when not in use.

Sample Floor Plan:

See Page 63.

SUPPORT FACILITIES:

SMALL ENSEMBLE REHEARSAL ROOMS:

Space Requirements: At least two rehearsal rooms of at least 350 square feet each are desirable. Rooms should be acoustically treated and acoustically isolated from the remainder of the school.

Special Needs: Lighting and air handling needs are the same as those for music classrooms.

Sample Floor Plan: See music suite diagram in Appendix.

PRACTICE ROOMS:

Space Requirements: Several practice rooms of at least 55 square feet are desirable. Rooms should be acoustically treated and acoustically isolated from the remainder of the school.

Special Needs: Lighting and air handling needs are the same as those for music classrooms.

Sample Floor Plan: See music suite diagram in Appendix.

ELECTRONIC KEYBOARD LAB:

Types of Instruction and Activities: Typical classroom and activity-based music study, with performance and sharing sessions

Space Requirements: A minimum of 500-750 square feet.

Special Needs:

1. Because of the heat generated by this equipment, temperatures should be a constant 68-70 degrees (F). Humidity should be maintained at no higher than 50 percent.. The room should be well ventilated, but air flow should not create drafts.
2. Individual student work surfaces should accommodate a personal computer, an electronic keyboard, and electronic modules. Provide sufficient work stations to accommodate the largest anticipated class.
3. Electrical outlets should be located on perimeter walls.
4. Acoustic treatment should be that of a standard classroom.
5. A window providing a clear view of the commons area should be provided to enhance effective monitoring of students.

Typical Furniture:

1. Audiovisual cart
2. Work table
3. Bookcases: Minimum of one (1); two (2) are desirable
4. File cabinets: Minimum of one (1); three (3) are desirable
5. Student work stations suitable for P.C. system, electronic keyboard, and electronic modules
6. Ergonomically appropriate student chairs
7. Power cleaners and surge protectors

Typical Equipment:

1. Electronic keyboards
2. Computers with modems and with telephone and Internet connections
3. Electronic music equipment

Sample Floor Plan: See Page 64.

MUSIC LIBRARY:

Purpose: To provide secured, organized storage of sheet music. Separate libraries for band, choral, and orchestra music are desirable.

Space Requirements: At least 150-200 square feet.

Special Needs:

1. File cabinets (3)
2. Sorting table with chairs
3. Adjustable display shelves for books, periodicals, and resource materials. Adjustable shelves for books, recordings, and tapes.
4. Teacher desk
5. Lockable storage for equipment

Sample Floor Plan: See music suite diagram in Appendix.

INSTRUMENT REPAIR:

Purpose: To facilitate on-site immediate and short-term repair of instruments.

Space Requirements: Approximately 50-75 square feet

Special Needs:

1. Work bench large enough to accommodate one to three individuals
2. Sink with hot and cold running water
3. Tub for washing tubas
4. Lockable storage

Sample Floor Plan: See music suite diagram in Appendix.

MUSIC SUITE: The design for a comprehensive music education delivery system at the high school level may best be developed around the concept of a music suite. Descriptions and illustrations of a sample music suite may be found in the Appendix of this document.

THEATRE ARTS

Purpose: To provide instruction via seat work, drafting and model making, improvisation, and rehearsal.

Types of Instruction and Activities: Lecture, play writing, demonstrations, independent inquiry, small- and large-group projects, design work, activity-based improvisation and scenes, rehearsals, and production meetings

CLASSROOM:

Space Requirements: Minimum of 1,200-1500 square feet (1,800 is desirable). Space is essentially for instruction and should be provided in addition to black box arena, theatre arts laboratory, or performance hall facilities.

Special Needs:

1. Should be located near performance and other arts education spaces and in a part of the school where noise will not affect other classes.
2. The facility should be treated with absorber and diffuser panels to provide appropriate acoustical properties and a quiet environment, and it should be acoustically isolated from the remainder of the school.
3. Climate control system should be quiet and should not produce drafts.
4. The physical nature of theatre arts activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
5. The room should be open throughout, with no fixed furniture or casework except along the perimeter. Outside wall corners should be rounded or bullnosed.
6. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts
7. Provision should be made for darkening the room for use of audiovisuals.
8. Electrical outlets should be located on perimeter walls.

8. The floor should be carpeted.
9. Audiovisual hook-ups should be provided.
10. A water cooler for rehydration should be readily accessible, but should not be located where compressor noise will be a distraction.
11. A minimum ceiling height of 14 feet is desirable.
12. Computer infrastructure to accommodate Internet access should be provided.
13. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Flexibility Needs:

Student furniture should be easily rearranged.

Typical Furnishings:

1. Moveable individual student tables and chairs. Tables should be suitable for technical drafting, model making, and typical study.
2. Teacher desk and chair
3. Dry marker and tack boards
4. Shelving and cabinet and drawer units for storing classroom and student materials, books, and projects

Typical Storage:

1. Lockable storage for books; audio, video, and computer equipment; audiovisual materials; art supplies; classroom props; costumes; etc.
2. Shelving--18" deep--for student projects, etc.
3. File cabinets for student and teacher files

Typical Equipment:

1. Television, video player/recorder, and video camera
2. Overhead projector and projection screen
3. Audio player with remote control and cassette and C.D. capability
4. Computers

BLACK BOX ARENA

Purpose: To provide learning, production, and performance experiences to facilitate the application of theatre knowledge and skills.

Types of Instruction and Activities:

1. Lecture, demonstration, instruction and practicum relevant to all areas of technical theatre and performance.
2. Application of technical theatre, to include scene building, theatre lighting, costume and prop building, sound, etc.
3. All forms of theatrical rehearsal and performance

Space Requirements: Adequate to accommodate all stage area and production facilities and an audience of 100-200

Special Needs:

1. Outside entrance to lobby and ticket sales area, with easy access to toilets and public phone(s).
2. Box office with window access to lobby, office furniture, and a business phone.
3. Control of any natural light sources.
4. Controlled theatrical lighting that can be focused to provide definition to performers and props throughout the performance space.
5. Minimum ceiling height of 20 feet to accommodate perimeter catwalks and hanging lighting instruments, curtains, and scenery.
6. Acoustic treatment.
7. Acoustically isolated from other instructional areas where noise might be distracting.
8. Noiseless climate control system that does not produce drafts.
9. Floors and walls of a dark neutral color, such as black or dark gray, that limits reflection of theatrical lighting.
10. Suspended flooring in the performance area--with either a black rubberized surface or wood stained a dark color.

11. Headset outlets for intercom/monitoring system throughout performance and audience areas.
12. Outlets for theatrical lighting and sound systems should be on separate circuits.
13. Standard electrical outlets on perimeter walls.
14. Audiovisual hookups for T.V. monitors.
15. Control area with visual access to performance areas for lighting, sound, and audiovisual equipment.
16. Located near other performing facilities, technical theatre areas, and other arts education spaces.
17. General lighting system separate from theatrical lighting for work, instruction, and rehearsals.
18. The physical nature of theatre arts activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
19. An alternative to a catwalk system for black box arenas has been designed of woven wire cable which is attached over the entire performance area. A steel channel is fastened to the perimeter walls of the room and the steel cables are attached to the channels. Each cable incorporates a turnbuckle that can increase tension as desired. Cables are closely spaced to prevent a person's foot from passing through, but are wide enough apart to allow light from lighting instruments above to light the performance area below without detrimental effects. The system acts as a very tight trampoline upon which students can safely walk and locate and adjust lighting instruments anywhere above the performance area. Additionally, where required, vertical cables can pass through the system to support scenery, backdrops, etc, below.

Flexibility Needs:

1. Portable and stackable seating and stage platforms to accommodate a variety of performing and audience arrangements.
2. Detached lighting instruments that can be relocated to suit the performance area configuration.

Typical Furniture:

1. Movable audience seating
2. Sturdy portable risers or platforms to accommodate changing the floor level for audience or performing areas.

Typical Storage:

1. Individual lockable, ventilated costume storage room with shelves and garment hanging bars
2. Individual lockable prop storage room with shelves
3. Individual lockable storage with shelves for light and sound equipment
4. Individual lockable storage room with shelves and cabinets for stage craft materials, supplies, equipment, and tools
5. Individual lockable storage room for modular scenic units and other scenic elements and furnishings

Typical Equipment:

1. Relocatable theatrical lighting instruments
2. Sound equipment, to include tape and CD decks and speakers
3. Headsets for intercom/monitoring system

Sample Floor Plan:

See Page 66.

LABORATORY/AUDITORIUM

Purpose: To provide instructional activities in production and performance and in the application of theatre arts knowledge and skills.

Types of Instruction and Activities: Lecture; demonstration; small- and large-group projects; meetings; scenery and costume construction; all types of technical theatre work; rehearsals; and performances

Space Requirements:

1. Large enough to seat 300-400 in the audience
2. Stage, off-stage space, storage, and requisite technical support spaces should accommodate the largest anticipated production/performance, to include plays, musical theatre, dance, and music performances

Special Needs:

1. The physical nature of theatre arts activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
2. Climate control equipment should not generate drafts and equipment operation and air movement within the facility should be noiseless.

Flexibility Needs:

1. Should be located in proximity to other arts education facilities.
2. A level area that can accommodate the largest anticipated performing instrumental group should be located at the front of the audience seating. Audience seating in this area should be removable for musical performances.

Typical Furniture: Audience seating

Recommendations for Individual Related Areas

Note: the following sections describe desirable features of the laboratory/auditorium most likely to be found in a magnet or performing arts school setting. Each contributes to the comprehensive theatre arts program. Owners and planners will need to collaborate on program needs and determine the content and extent of the facility required.

LOBBY:

1. Separate box office with phone and publicity marquee or display case.
2. Toilets to accommodate audience during performance intermissions.
3. Inner lobby or light lock area to separate the house and lobby for the elimination of outside light and noise during performances.
4. Display areas and lighted display cases.
5. Public telephone.
6. Concessions booth with kitchen equipment for preparation, storage, and serving of refreshments.

HOUSE:

1. Raked or inclined audience seating with sight lines for optimal viewing of the entire stage space.
2. Orchestra space in front of the stage (with circuits for orchestra lighting, cuing, and monitoring) that is created by several rows of removable seats at the front of the house.
3. Noiseless ventilation and climate control system.
4. Acoustic treatment to provide optimal sound reception by audience.
5. Dimmer controls for house lighting that are accessible to theatre and non-theatre personnel.
6. Stage lighting and sound positions to include beams and portals where instruments can be hung that can be accessed by stairs and/or safety catwalks concealed behind walls or ceilings.
7. Separate booths for the operation of lighting, sound, and audiovisual equipment and located in the rear of the house with visual access to the entire performing space.

STAGE:

1. Proscenium arch with fire safety curtain.
2. Proscenium and backstage walls of a dark neutral color such as black or dark gray to limit reflection of theatrical lighting.
3. Heat-sensor sprinkler and emergency lighting systems.
4. Loading doors that open directly into the scenery construction area.
5. Suspended stage floor of unvarnished soft wood stained black that accepts nails and screws.
6. Adequate space at the rear of the stage to accommodate persons crossing backstage and movement of scenery, wagons, or furniture from one side of the stage to the other.
7. Wing space on each side of the stage that is the same depth as the stage and with a minimum width of one-half the proscenium opening.
8. Work lights that are accessible to theatre and non-theatre personnel and which can be operated from a location other than the lighting console.
9. Outlets for intercom and monitoring system headsets at various locations around the stage.
10. Outlets for lighting and sound that are wired separately and located near battens or other lighting positions in the floor or around walls where lighting instruments might need to be hung.
11. Wall outlets on individual circuits for auxiliary items such as fog machines.

12. Sufficient lighting instruments to illuminate the playing space and allow for special effects lighting.
13. Lighting positions in the beams, on lighting trees, and in the portals.
14. Thrust area or stage apron that has theatrical lighting comparable to the stage.
15. Curtains, to include an act curtain of a dark color, along with teasers and tormentors colored black to absorb light and sight lines.
16. Multiple curtain tracks at different depths from the proscenium on which to install and operate drops, scrim, or other pieces of scenery.

MAKEUP ROOM(S):

1. Ideally, should be separate from dressing rooms.
2. Should accommodate cast for the largest productions, to include large musicals.
3. Should be connected to the stage by a hallway and have an intercom and monitoring system.
4. Should be soundproofed so that noise does not carry onto the stage.
5. Should have a deep, wide utility sink with hot and cold supply.
6. Should contain makeup tables or counters with mirrors surrounded by incandescent lights and with lockable storage beside or beneath.
7. Lockable storage cabinets for wigs and makeup prostheses.

DRESSING ROOMS:

1. A minimum of two large rooms (one for males; one for females) connected to the stage by a hallway to accommodate cast for the largest productions, to include musicals.
2. Costume racks and drawer storage for costume items and several full-length mirrors.
3. Individual drawers and lockers for safekeeping of performers' valuables and personal makeup.
4. Toilets (with showers) connected to the dressing rooms and adequately soundproofed from the stage for the exclusive use of performers during and after performances.

SCENERY AND PROPS CONSTRUCTION ROOM:

1. Large work space with high ceilings adjacent to the stage.
2. Stage access via wide doors as high as the proscenium.
3. Oversized exterior doors that are parallel to the stage access doors for loading and unloading supplies and materials, furniture, and equipment.
4. Electrical outlets on perimeter walls (both 120v and 240v) that will support shop equipment.
5. Dust collection and exhaust/ventilation system.
6. Deep utility sink with hot and cold supply.
7. Both incandescent and fluorescent lighting to facilitate the painting of scenery in more natural light and construction in optimal illumination.
8. Several large work tables.
9. Lockable storage for equipment, tools, materials and supplies.
10. Fireproof cabinets for paint and other flammable liquids.

11. Racks and bins for wood, metal, and plastics.
12. Storage space for constructed scenery and platforms that can be reused.

PROPS STORAGE:

1. Large, separate auxiliary storage area (lockable) for temporary or permanent storage of props.
2. Floor-to-ceiling shelving on perimeter walls.

COSTUME CONSTRUCTION ROOM:

1. Work space to accommodate large cutting tables, sewing tables, sewing machines, and chairs.
2. Fitting area with raised platform and full-length mirrors, with access to a small, private dressing room.
3. Both incandescent and fluorescent lighting to facilitate the construction of costumes and to duplicate their appearance under natural lighting.
4. Laundry facility with floor drain that contains a dye sink, a utility sink with hot and cold supply, washer and dryer, and a clothing rack.
5. Ironing tables with safety irons.

COSTUME STORAGE:

1. Large, separate auxiliary storage room (lockable) for storage of costumes, footwear, headgear, and accessories.
2. Racks, drawers, and closets for costumes and costume construction materials and supplies, such as fabrics, trim, etc.

LIGHTING BOOTH (OR ROOM):

1. A separate booth located at the rear of and completely apart from the theatre house and separate from the sound booth.
2. Soundproofed.
3. Should have a sliding glass window that overlooks the stage.
3. Should have an electronic dimmer control (preferably computerized), patch panel, and control board with multiple pre-set capabilities and which can take control of and operate the house lights.
4. Equipped with an intercom and monitor, including headset jacks, for communicating with other areas of the theatre.
5. Independently wired receptacles with positions for follow spots and projectors.

LIGHTING INSTRUMENT AND EQUIPMENT STORAGE:

Lockable storage with deep shelving on one wall for lighting instruments, hardware, equipment, tools, and supplies (to include color media and cables).

SOUND BOOTH (ROOM):

1. A separate booth located at the rear of the theatre house, separate from the lighting booth.
2. Soundproofed.
3. Should have a sliding glass window that overlooks the stage.
4. Has a mixer system, an amplifier, speakers, a transmitter, a turntable, a CD player, two tape decks, and a tuner--preferably computer controlled.
5. Has an intercom and monitor system that includes adequate headphone jacks for the size of the facility.

SOUND EQUIPMENT STORAGE:

Lockable storage for sound equipment such as speakers, cables, microphones, and related hardware and supplies.

Sample Floor Plan:

See Page 70.

PRACTICE ROOMS:

Purpose: To accommodate practice by individuals and small groups; instruction and rehearsal for small groups; auxiliary dressing; and temporary storage during performances.

Types of Instruction and Activities: Practice; rehearsal

Space Requirements: Minimum of from 50-100 square feet

Special Needs:

1. Should be convenient to primary performance spaces and other arts education facilities.
2. Should be acoustically separated from other instructional spaces with doors, windows, and walls with low acoustical transmission characteristics.
3. Should be accessible from a corridor.
4. Mechanical systems should be noiseless, with no sound transmission from other areas via ducts.
5. Should have typical classroom illumination with individual room switches.
6. Should provide visual access between rooms and between rooms and corridors.
7. Lockable only from outside (with key).
8. Oversized door to accommodate movement of pianos or other similar equipment.
9. Electrical receptacles on perimeter walls.
10. Jacks for audiovisual and television equipment and at least one computer.

Typical Furniture: Furniture should be kept to a practical minimum of a small table or counter and several chairs.

Sample Floor Plan: See sample floor plan for high school laboratory/auditorium on Page 70.

OFFICE:

Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Performance Hall

School Planning does not recommend large performance halls. If it is determined that such a facility is to be part of a school design, consultation among school planning and arts education staff, the designers, local school and central office staff, and community representatives should occur prior to the schematic plan phase of the design process. School Planning should be contacted to request such a conference.

VISUAL ARTS

CLASSROOM/STUDIO:

Purpose: To provide typical classroom, activity-based visual arts study involving both small and large works of art.

Types of Instruction and Activities: Discussion; demonstration; individual and group activities; computer use; display; and video and slide projection. Activities may include, but are not limited to, drawing, collage, the making of three-dimensional work, print making, painting, fibers, photography, jewelry, ceramics, calligraphy, etc.

Space Requirements:

1. One art room per 500 students enrolled.
2. A minimum of 55 square feet of work space per student, excluding storage.
3. 1,200-1,500 square feet, excluding storage.
4. A minimum of 400 square feet of storage.
5. Separate 45-square-foot kiln room.
6. Should be located near other arts education facilities.

Special Needs:

1. Where two or more art rooms are needed, they need not be identical but may each combine some specialized areas.
2. Casework and furnishings should be adult sized.
3. Ground-floor location to facilitate delivery of materials and supplies and to provide an outdoor venue for instruction and practice.
4. Minimum ceiling height of 10'-0".
5. Several large, acid-resistant sinks with sediment traps and accessible from more than one side. Sinks should be height-appropriate and should have hot and cold supply and mixing faucets.
6. General lighting that includes both fluorescent and incandescent fixtures for accurate color work and which is positioned to reduce shadows in all parts of the room.
7. Powered ventilation to exhaust fumes and promote drying of art work.
8. Vented box or area for airbrushing and for mixing toxic fumes.

9. Floor drains in areas where water or other liquids might be spilled.
10. Electrical receptacles on perimeter walls and above counters, to include 240v outlets where required, to lessen use of extension cords.
11. Power outlets of a specific type to accommodate specialized equipment such as kilns and potters' wheels.
12. A North-facing wall with large windows and skylights to provide the most desirable lighting.
13. A minimum of one wall with display capability from floor to ceiling, covered in a porous material that can accommodate hanging devices such as pins, staples, or tacks.
14. Ceiling tracks along the walls and across the ceiling to hang three-dimensional art work.
15. Display casework such as shelves and cases for two- and three-dimensional work like sculpture and ceramics. (Should be well lighted and equipped with multiple-lighting plug-in tracks with movable lighting fixtures.)
16. Acoustic treatment to lessen interference with other instructional areas.
17. Well ventilated, but with air flow that does not create drafts.
18. The physical nature of visual arts activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.
19. A counter-height table or cabinet deep enough to accommodate a large paper cutter.
20. Multiple paper towel and soap dispensers placed in a variety of locations around the room.
21. Wiring for television monitor, computer with Internet access, and telephone.
22. Direct access to partially covered outdoor terrace with secure electrical outlets.

Flexibility Needs:

1. Furniture should be easily moved to facilitate frequent reconfiguration of instructional space.
2. Drawing tables with adjustable tops may be substituted for student tables.

Typical Furniture:

1. Large, flat tables with durable tops and chairs that allow for frequent re-configuring.
2. Drying racks adequate for multiple classes for drying art work.
3. Lockable flat storage to accommodate large art pieces.

Typical Storage:

1. Storage within the classroom for student materials and supplies.
2. Minimum of 350 square feet of lockable storage contiguous to the classroom for large quantities of diverse art supplies, equipment, and student work.
3. Storage for large sheets of art paper, matte board, clay and clay containers, print-making and sculpture supplies, tools, and specialty items.
4. Lockable metal storage cabinets suitable for flammable and combustible materials.

Typical Equipment:

1. Kiln, with appropriate ventilation, located in a separate room of at least 45 square feet contiguous to the classroom.
2. Easels, potters' wheels, floor looms, printing presses, and drying racks.
3. A.V. screen, with blinds or shades for controlling natural light.
4. Computers, printers, multi-media equipment (best located in a separate space contiguous to the classroom).

Sample Floor Plan:

See Page 73.

PHOTOGRAPHIC LABORATORY

Note: A photographic laboratory will necessitate the use of a visual arts classroom for related instruction. In some cases, this will be a second visual arts classroom with a photography focus but which is also appropriately appointed to support instruction in other visual arts mediums.

Purpose: To develop and use photographs and related photographic techniques.

Types of Instruction and Activities: Lecture; discussion; hands-on activities and projects

Space Requirements:

1. 100 square feet for chemical mixing and film developing.
2. 180 square feet for darkroom printing.
3. 60 square feet for finishing.
4. Larger schools need an additional 80 square feet for color processing.

Special Needs:

1. Minimum 9'-0" ceiling height.
2. Special photo lab sink(s).
3. Acid-resistant drain piping in darkroom.
4. Special ventilation as required by code for photographic laboratory. Electrical outlets to include some wired and switched for special lamps used in film processing and photo printing.
5. Light lock at darkroom door.
6. Near other visual arts and arts education facilities.

Flexibility Needs: Acoustical insulation, if used for sound filming or videotaping.

Typical Furniture:

1. Work counters or tables, with chairs or stools
2. Light table for viewing negatives

Typical Storage:

1. Wall cabinets for storing film, materials, supplies, and tools
2. File cabinets
3. Fire-proof cabinets for storing chemicals and similar substances

Typical Equipment:

1. Refrigerator
2. Assorted photographic equipment

Sample Floor Plan:

See pages 74 and 75.

CERAMICS ROOM

Purpose: To teach the processes and techniques involved in learning about, creating, making, and finishing ceramic art.

Types of Instruction and Activities: Lecture; discussion; demonstration; ceramics production

Special Needs:

1. Large, deep sink with hot and cold supply and clay trap
2. Rust-proof, leak-proof, air-tight portable clay bins
3. Required wiring for adequate potters' wheels to accommodate largest class
4. Damp box for storing works in progress sized to accommodate largest total enrollment
5. Drying cabinet to accommodate largest total enrollment
6. Extra ventilation, as required.

KILN ROOM

Purpose: To house an electric kiln for finishing art work of clay or other such material.

Types of Instruction and Activities: Operation of a kiln and the related processes

Space Requirements: Minimum of 45 square feet

Special Needs:

1. Non-flammable walls
2. Ventilation adequate to remove heat and fumes
3. Storage for kiln supplies, such as stilts, kiln wash, etc.

GALLERY/DISPLAY SPACE

Purpose: To display student art to all students and staff in the school and to the public.

Types of Instruction and Activities:

1. Viewing and critique of art by students and the public resulting from study and learning in visual arts classes
2. Instruction on the appropriate display of various kinds of art

Space Requirements:

1. Although display space may be concentrated in one location, it may be desirable and feasible to locate display space in several locations throughout the school.
2. The size of the program, practicality and security issues, and the location of visual arts facilities should influence the location of display space.
3. Minimum of 500 square feet total floor space is desirable.

Special Needs:

1. Space should be central to the flow of student traffic.
2. Minimum ceiling height of 9'-0"--preferably higher--is desirable.
3. Easily accessed display cases or cabinets, with locks, that can accommodate one-, two-, and three-dimensional art such as paintings and drawings, sculpture, ceramics, and jewelry.
4. Well lighted to accommodate variety in displays.
5. Some lighting may need to be of a specific type, such as multiple-light plug-in tracks with moveable spotlights.
6. Ceiling tracks with hooks along display walls for hanging multi-dimensional art work.
7. Some display units may be moveable.

OFFICE

Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

APPENDIX

ARTS EDUCATION PROGRAM DESCRIPTIONS

Dance

Dance develops for the student an understanding of the diverse ideas, beliefs, cultures, attitudes, and feelings of humankind throughout time, as communicated by movement, by:

- Providing the student with a kinesthetic (bodily) way of experiencing, perceiving, understanding, learning, and communicating.
- Developing higher-order thinking through perceiving, creating, performing, analyzing, and evaluating.
- Providing development and application of reading, writing, and mathematics skills.
- Challenging the intellect and creativity of each student.
- Instilling concentrated focus and a disciplined approach to lifelong learning.
- Integrating with all framework content areas.
- Developing respect for diverse ways of thinking, working, and expressing ideas.
- Nurturing problem recognition and solving through considering, assessing, and adopting appropriate solutions.
- Providing opportunities for social development and collaboration with others.
- Forcing a diverse cultural and historical perspective.
- Promoting a healthy body and an active mind for learning.
- Encouraging aesthetic discovery and growth.
- Providing knowledge of vocational and avocational opportunities.

Music

The study of music contributes in important ways to the quality of the student's life by:

- Developing perception, observation, communication, and the creative process.
- Strengthening the understanding of mathematics and the ability to read and write.
- Nurturing and utilizing a wide range of thinking skills in creation and performance.
- Integrating many elements of study and knowledge of music, other art forms, other curricular areas, and related uses of technology.
- Helping the student to understand his or her own and other cultures.
- Increasing self-discipline and control of the emotions in thought and action.
- Expanding aesthetic comprehension and the ability to critique effectively.
- Providing opportunities for social development and interaction with others.
- Aiding the student in learning to adapt and respect others' diverse ways of thinking, working, and expressing themselves.
- Enhancing problem-recognition and problem-solving abilities and the ability to consider and adopt alternative solutions.
- Encouraging the student to expand his or her understandings and horizons.
- Helping the student to become a knowledgeable consumer of music.

Theatre Arts

Theatre arts teaches the basic skills, thinking skills, and personal qualities that:

- Develop an understanding of the ideas, attitudes, beliefs, and feelings of diverse peoples in different times throughout history, as communicated through literature and theater.
- Employ techniques for teaching and learning, through developmental processes and activity-oriented methods.
- Promote higher-level critical and creative thinking skills, problem recognition and solving, intuition, examination and application of conflict resolution, and the learning of curriculum skills such as reading, writing, and mathematics.
- Assist in focusing the emotions for controlled use, strengthening the imagination for creative self-expression, disciplining the voice and body for purposeful use, expanding intellectual horizons to include aesthetic awareness, and providing a basic understanding and critical appreciation of all of the theatre arts.
- Involve making connections between theatre arts and other art forms, other curriculum areas, dramatic media, and the related use of technology (to include numbers and data).
- Provide an intense study of what playwrights seek to convey and how this is intensified through theatrical production, thus giving students insights into countless aspects of the diverse and changing world.
- Include the reading, viewing, listening, researching, writing, speaking, preparing to perform, performing, and directing of traditional and experimental theatrical forms, as well as the accompanying aspects of technical production.
- Engage students in the creative and the practical application of theatre techniques (such as observing, considering possibilities, and communicating) that students can use in studying other areas of the curriculum and for life-long learning.
- Enable students to function and communicate more proficiently, work independently as a member of a team, value the individual contributions of others, and to learn virtually any subject matter in a more dynamic way.

Visual Arts

Visual arts provides visual literacy for the child by promoting fluency in the various modes of visual communication by:

- Employing developmentally appropriate processes for teaching and learning that are based on activity-oriented methods.
- Encouraging disciplined creativity by using higher-level critical thinking skills to identify problems, explore original solutions, and complete the problem-solving process.
- Utilizing reading, writing, and math to help explore art concepts and to facilitate learning in these three areas.
- Making enriching connections between the visual arts and other curricular areas.
- Expanding aesthetic and intellectual awareness through reading, writing, listening, researching, discussing, critiquing, and reflective thinking.

- Teaching how to use both traditional media and contemporary methods incorporating new technology to create art that is individual and expressive.
- Building knowledge and understanding about ideas, values, and beliefs of people in different times throughout history, as communicated through visual art, with the express goal of developing visually literate students with an empathetic and critical appreciation of the artistic achievements of others.

CUBIC VOLUME FOR CHORAL AND INSTRUMENTAL MUSIC ROOMS

Excellent acoustics require adequate cubic room volume that results from ample floor space and ceilings of sufficient height. In too small a room, the first sound reflections return to the musician's ears so quickly that their sound cannot be heard.

Where adequate cubic volume is achieved, sound takes longer to reflect off more distant wall and ceiling surfaces, enveloping the musician with sound and providing a sense of presence. The musician can thus hear better, creating an environment in which learning can be achieved by listening. This should be a minimum goal for spaces designed for instrumental and choral music learning.

Rooms that are too small may also result in dangerously high sound-pressure levels, due to insufficient volume to dissipate and absorb the loudness created by musical ensembles. Rehearsals in an excessively loud environment can be extremely stressful to both student and teacher and can cause permanent hearing loss over time. Orchestras and concert, marching, and jazz bands generate especially high sound-pressure levels. Special care should be taken to control loudness where these groups rehearse and perform.

CUBIC VOLUME GUIDELINES

ROOM	CEILING HEIGHT	FLOOR SPACE	RESULTING VOLUME PER MUSICIAN
Choral Music	16-20 feet	1800 square feet	350-500 cubic feet
Instrumental Music	18-22 feet	2500 square feet	550-700 cubic feet

Courtesy Wenger Corporation

THE MUSIC SUITE (9-12)

The design for a comprehensive music education delivery system at the high school level may best be developed around the concept of a music suite. Elements that should be considered in the layout of a music suite include floor space, traffic flow, access to related areas, teacher monitoring, and flexibility. A sample layout is provided at the end of this section.

Floor Space

1. Adequate room size and volume is necessary to achieve effective acoustics.
2. Music education is a physical activity requiring student movement.
3. Instrumentalists need more space than vocalists to accommodate instruments and stands.
4. Pianos, podiums, risers and other equipment require permanent space in rehearsal rooms.
5. Other items, such as garments, sheet music, and instruments, require additional storage.
6. Planning should be done for program growth, changes in curriculum and scheduling, use of technology, and facility expansion.

Traffic Flow

1. The music suite is a center of activity, and the floor plan should promote easy, quick and safe movement.
2. The beginning and ending of classes involves a great deal of movement as students find or replace their music, get or return their instruments from or to storage, and take their seats for class--all in a period of approximately four minutes.
3. Small groups often move from large areas to smaller practice spaces during the same period of time.
4. Many individuals may use the suite throughout the day for private lessons and study.
5. Equipment and instruments may be constantly moved from one part of the suite to another.
6. Since many activities may be going on at once in the music suite, traffic flow should be designed not to disturb other areas or activities within the suite.

Access to Related Areas

1. An effective floor plan places related areas in proximity and the suite in a strategic position within the school.
2. The suite should be located near ramps, rather than steps, to facilitate movement of large equipment and instruments (tympani, pianos, etc.).
3. Doorways should be wide and unobstructed. Hallways should be wide enough to accommodate the passage of grand pianos.
4. Since the music suite is often used after hours and on weekends, it should be accessible apart from the remainder of the school.

5. Locker rooms and/or dressing rooms should be located in proximity to the suite to facilitate students changing in to and out of robes or uniforms.
6. Band instrument and uniform storage should be located within or adjacent to the band room.
7. Robe storage and the choral library should be located contiguous to the chorus room.
8. The music suite should be located away from general traffic flow to reduce noise and reduce disruption and vandalism.
9. The most efficient music suite is located near the athletics fields for marching band rehearsal, near the auditorium for performances, and near a parking lot for loading buses.

Teacher Monitoring

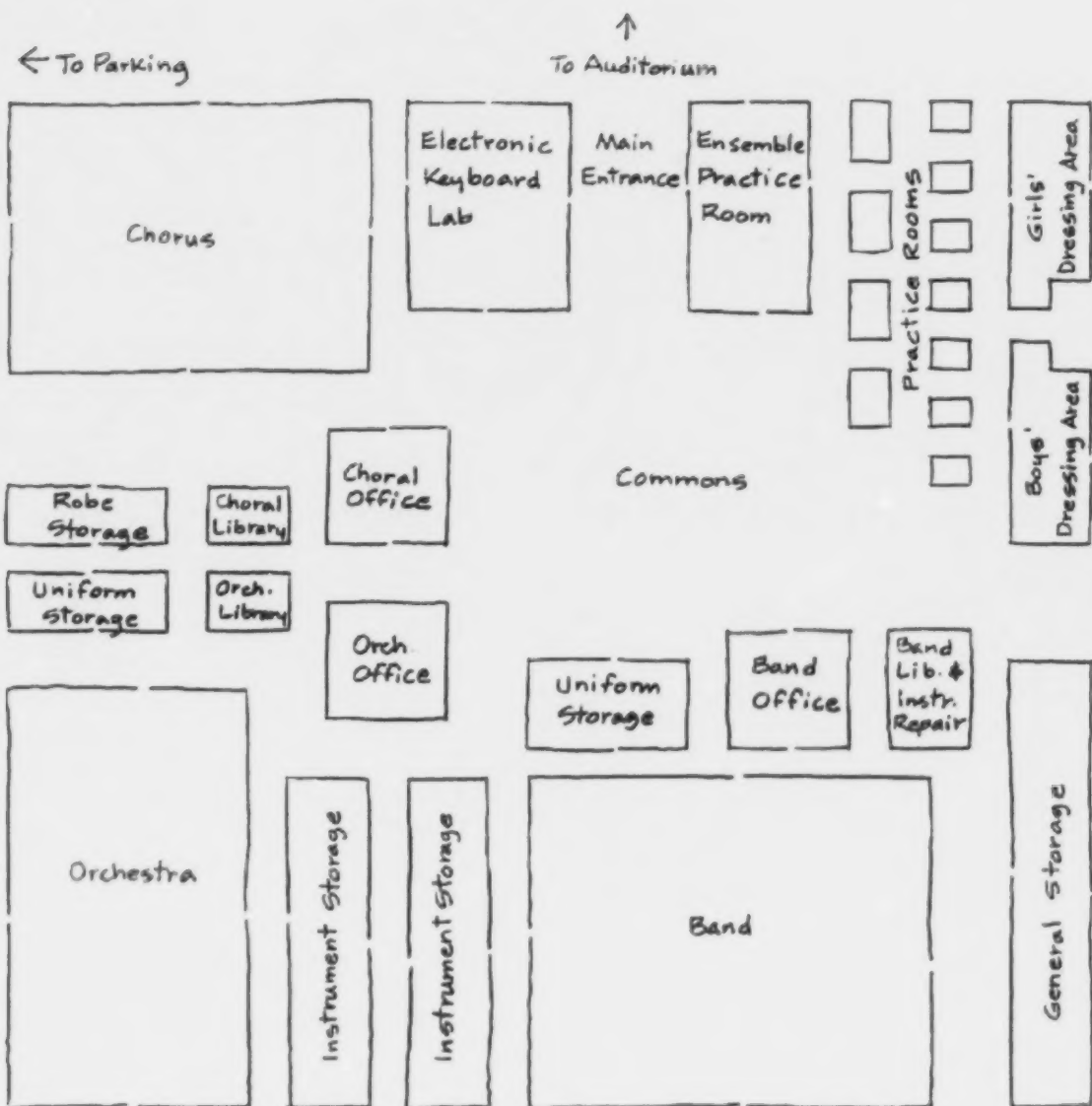
1. Music faculty often supervise students and multiple activities at the same time. They need to observe as much of the suite as possible at all times to improve monitoring and control.
2. Ideally, all areas of the suite should be visible from the suite offices.
3. Offices should be centrally located, with large windows for clear sight lines.
4. Entrances and exits should be visible from offices.

Flexibility

1. Along with daily routines, an effective floor plan must accommodate marching drills, choreography practice for musicals, dance line rehearsals, and community events.
2. Classrooms should be easily reconfigured for various uses.
3. Portable risers should be used, rather than the built-in variety.
4. Flat, open floor spaces provide more options for activities and are easily accessed by the handicapped.
5. Portable equipment allows freedom to make better use of space.
6. Future anticipated needs in enrollment and technology should be accommodated by a design.

Sample Diagram:

See next page.



HIGH SCHOOL MUSIC SUITE

Courtesy Wenger Corporation

ACOUSTICS

Good acoustics are dependent upon the ideal combination of absorption and diffusion of sound. Each music environment should be treated individually, according to its shape, volume, etc. For example, treating solely with absorber panels will only reduce loudness. Diffuser panels are needed to scatter sound and improve communication from one part of a room to another.

Frequency Range The frequency range of sound in the music suite is very different from the frequencies produced in other areas of the school and should be treated accordingly.

1. Common finishing materials, such as carpet, drapes, and upholstery, absorb higher frequencies but not lower frequencies.
2. In rooms that utilize only high-frequency absorption, flutes, violins, sopranos, and other high-frequency sounds (including the high overtones of most instruments) can be lost. Intonation, articulation and timing can be blurred, and critical listening may become impossible.
3. Similarly, low frequencies become overpowering and acoustics will lack clarity and become loud and "boomy."
4. Finishing materials should be evaluated for their effect on the variety of frequencies produced within the music environment. Treatments should be specifically designed to cover this broad range of needs and acoustic materials used that are rated by the frequencies they are designed to affect.

Absorption and Diffusion The ideal music suite has the proper combination of absorption and diffusion to control excessive loudness and scatter sound throughout the environment, producing an accurate and balanced acoustical result.

Sound absorption can generally be defined as the reduction of sound energy that occurs when sound comes into contact with surfaces and materials. When sound strikes a hard, dense surface, such as a gymnasium floor, there is nominal absorption. When the surface is that of a thick, fibrous material, such as a theatre's curtained walls and acoustical panels, a great deal of sound energy can be absorbed and less sound reflected back toward its origin.

Sound diffusion can generally be defined as the scattering and redirection of sound resulting from acoustically reflective surfaces. Diffusion of musical sound is necessary so that it can be clearly heard from all points in a space. Extravagant ornamentation, such as columns and plaster work in historic theatres, produces many angled, acoustically reflective surfaces that result in excellent diffusion.

Different music environments require varying degrees of absorption and diffusion, depending upon shape, volume, etc. A proper balance of absorption and diffusion is necessary to create

proper reverberation times that can give the instructor a more accurate account of student performance and progress. The following should be considered during the design process

Untreated room:

1. Parallel walls create flutter echo.
2. Carpet, drapes, and upholstery absorb higher frequencies only, leaving the remaining lower frequencies overpowering, reverberant, and indistinct.
3. Loudness is excessive and nearly impossible to control.

Treated with absorber panels only:

1. Panels absorb high and low frequencies, reducing flutter echos and "boomy" sound.
2. Loudness is reduced, but overall acoustics are unbalanced.
3. Lack of diffuser panels severely limits sound reflection, adversely affecting communication within the ensemble.

Treated with absorber and diffuser panels:

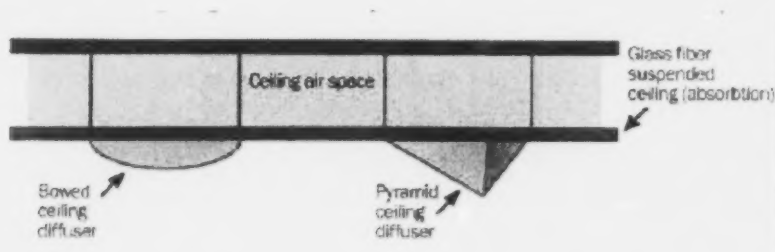
1. The ideal combination of absorber and diffuser panels creates an acoustically balanced environment.
2. Flutter echo, reverberation, and "boomy" sounds are eliminated.
3. Loudness is controlled and balanced over the full audible range.
4. Performers can hear themselves and others.
5. Instructors hear balance with accuracy.

Passive Treatments Each surface in the music environment has a direct effect on how sound and acoustics work within the environment. The following treatments affect the acoustics of a room.

Ceiling finishes:

1. The ceiling is the largest area available for acoustic treatment.
2. Suspended ceiling treatments create air space needed to trap low-frequency sounds.
3. Suspended fiberglass panels provide the broad-range frequency absorption required for the typical band room and are twice as effective as typical mineral board ceilings. Diffuser panels can also be hung from the suspended ceiling grid.
4. Absorptive fiberglass, which is often identical in appearance to mineral board, should be specified.

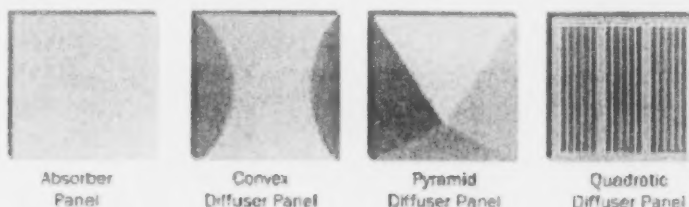
5. Ceiling height should be measured from floor to suspended ceiling--not from risers.



Courtesy Wenger Corporation

Wall finishes:

1. Walls should be treated with a combination of absorber and diffuser panels.
2. Absorption panels on the lower wall behind percussion and lower brass sections will reduce loudness significantly.
3. The thicker the fiberglass treatment, the lower the frequency it can absorb. Three inches is a good minimum thickness for fiberglass for effective wide-range absorption of musical frequencies.
4. Reactive diffusers are available in a variety of shapes and sizes.



Courtesy Wenger Corporation

Floor finishes:

1. Carpeting absorbs high-frequency sounds. If carpet must be used, select thin industrial-grade carpet that is acoustically nearly transparent.
2. Excessive use of thin carpet will reduce the ability to hear high-frequency sounds.
3. Most musicians prefer wood or other hard-finish floors because: (a) floors are easier to clean; (b) most performance areas are hard-surfaced; and (c) emptied water keys from brass instruments can make carpet smell stale and musty (air quality concern).

Active Treatments Active acoustics utilize electro-acoustic elements--advanced microphones, speakers, and digital signal processing (DSP)--to positively treat acoustics. It is important to treat a space with effective passive treatments before active acoustics are installed. The environment should already have good sound isolation and adequate volume.

1. The active acoustic system uses passive absorber panels as its foundation.
2. Speakers replace diffuser panels to provide improved diffusion throughout the environment.
3. Digital signal processing (DSP) can change the acoustics in a space with the push of a button.
4. Acoustics in the space can be switched to simulate center stage of an auditorium, a recital hall, or any other environment. This allows instructors and students the flexibility to practice in environments that simulate the acoustics of the space in which they most frequently perform.

STORAGE

Storage needs in the music suite are great and varied, and the floor plan should provide adequate storage for instruments, robes, uniforms, and music. Because most music equipment is fragile, expensive, and prone to vandalism, storage spaces should be durable and secured. During the design process, it is vital to address types of storage, safe traffic flow, and security.

Garment:

1. Secure, ventilated storage will prevent mildew and protect robes, uniforms, and other garments.
2. Storage of garments on single-line rolling racks allows garments to be removed from the storage room when more direct student access is required.

G A R M E N T S T O R A G E G U I D E L I N E S		
TYPE OF STORAGE	GARMENT QUANTITY	FLOOR SPACE
Choral robes	100 robes	2.5 sq. ft. per garment or 150-250 square feet* (2-4 inches per hanging robe)
Band uniforms	100 uniforms	3 sq. ft. per garment or 300-400 square feet* (4-5 inches per hanging uniform)

* Square footage requirements given are for a 60-80 member program.

Courtesy Wenger Corporation

Instrument:

1. Musical instrument storage should be large enough to also hold the student's books, outerwear, and other personal effects.
2. Consistent year-round temperature and humidity levels are necessary to prevent damage to instruments. Such damage may include cracking, loosening of glue joints, and corrosion.

3. Temperature should remain constant between 65 and 70 degrees Farenheit and relative humidity should remain between 35 and 50 percent.
4. Storage cabinets with solid doors acoustically reduce cubic volume and occupy wall space needed for acoustic treatment, and should be located outside of music rooms.
5. Cabinets located within music rooms should have grille doors, with open cabinet interiors that act as diffuser surfaces to eliminate flutter echo. Grille doors also allow visual inspection and enhance ventilation.

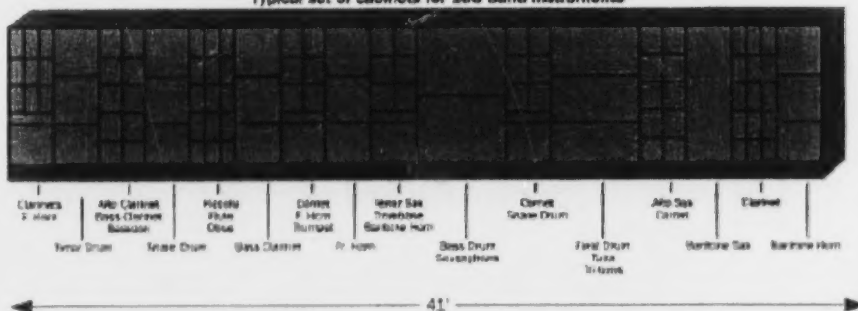
Average distribution of band instruments

INSTRUMENT	PERCENT
pictoto	1%
oboe	3%
flute	12%
clarinet	24%
alto clarinet	3%
bass clarinet	3%
bassoon	4%
alto sax	5%
tenor sax	1%
baritone sax	1%
cornet/trumpet	14%
french horn	6%
baritone horn	4%
trombone	6%
tuba	4%
snare drum	6%
tenor drum	2%
bass drum	1%
	100%

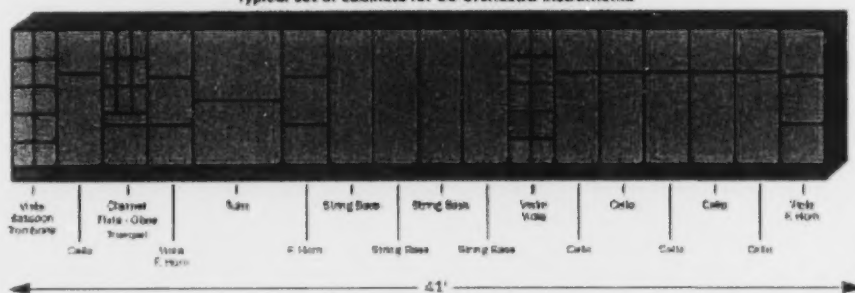
Average distribution of orchestra instruments

INSTRUMENT	PERCENT
violin	25%
viola	19%
cello	14%
double bass	8%
flute	3%
clarinet	3%
trumpet	6%
trombone	4%
tuba	1%
french horn	11%
oboe	3%
bassoon	3%
	100%

Typical set of cabinets for 100 Band Instruments



Typical set of cabinets for 50 Orchestra Instruments



INSTRUMENT STORAGE GUIDELINES

TYPE OF STORAGE	ACCOMMODATES	SQUARE FEET
Instrument	150-200 instruments	4 sq. ft. per instrument or 600-800 square feet*

*Square footage requirements given are for a 50-60 member program.

Courtesy Wenger Corporation

Music library:

1. Music storage should protect music from damage but be convenient, so music may be located quickly and quietly.
2. Sheet music storage should be in or near the instructor's office to control access.
3. Pull-out storage units work best on wood, tile, or other hard-finish surfaces.
4. Provide an adjacent area where music can be collected, sorted, and distributed.
5. Storage systems should be placed in the corners of the storage room to maximize space utilization. High-density systems offer more shelves than traditional filing cabinets and can be placed side by side and pulled out individually as needed.

SHEET MUSIC STORAGE GUIDELINES		
NUMBER OF TITLES	HIGH DENSITY STORAGE SYSTEMS FILING CABINETS REQUIRED	STANDARD FILE CABINETS FILING CABINETS REQUIRED
500	35 sq. ft.	65 sq. ft.
1,000	70 sq. ft.	130 sq. ft.
2,000	140 sq. ft.	260 sq. ft.
3,000	210 sq. ft.	390 sq. ft.

Courtesy Wenger Corporation

Other:

1. Space should be provided in the music room for portable storage of music folios, small percussion instruments, stereo recording equipment, and computers.
2. Portable storage units allow for easy movement of instruments and equipment between spaces.

TRAFFIC FLOW

1. Music suite storage areas are prone to congestion, which can waste time and promote undesirable behavior. A plan should promote smooth flow of student traffic.
2. Robe and uniform storage rooms provide excellent sound isolation when used as buffer zones between instructional spaces.
3. Place instrument storage in the music room in proximity to the related instrument sections.
4. If instruments are to be stored in a separate room, oversized entry doors should be placed at each end of the room to improve safe traffic flow during periods of peak congestion.
5. Allow a minimum of 3'-0" between cabinets and opposing walls and 6'-0" between rows of opposing cabinets to relieve congestion and reduce the possibility of damage to instruments. Increase these minimums if the room has only one door.
6. Avoid placing double-door cabinets next to one another to prevent contact between doors. This will also expedite the removal of instruments by ensuring that students don't have to wait for other students accessing an adjacent cabinet.

SECURITY

1. For maximum security, plan for separate lockable storage rooms for each program and provide lockable cabinets inside.
2. Motion detectors can help to prevent unauthorized entry and vandalism.
3. Storage rooms should be located where they can be observed from the office(s).
4. The suite should be secured from the remainder of the school for after-hours and weekend activities.

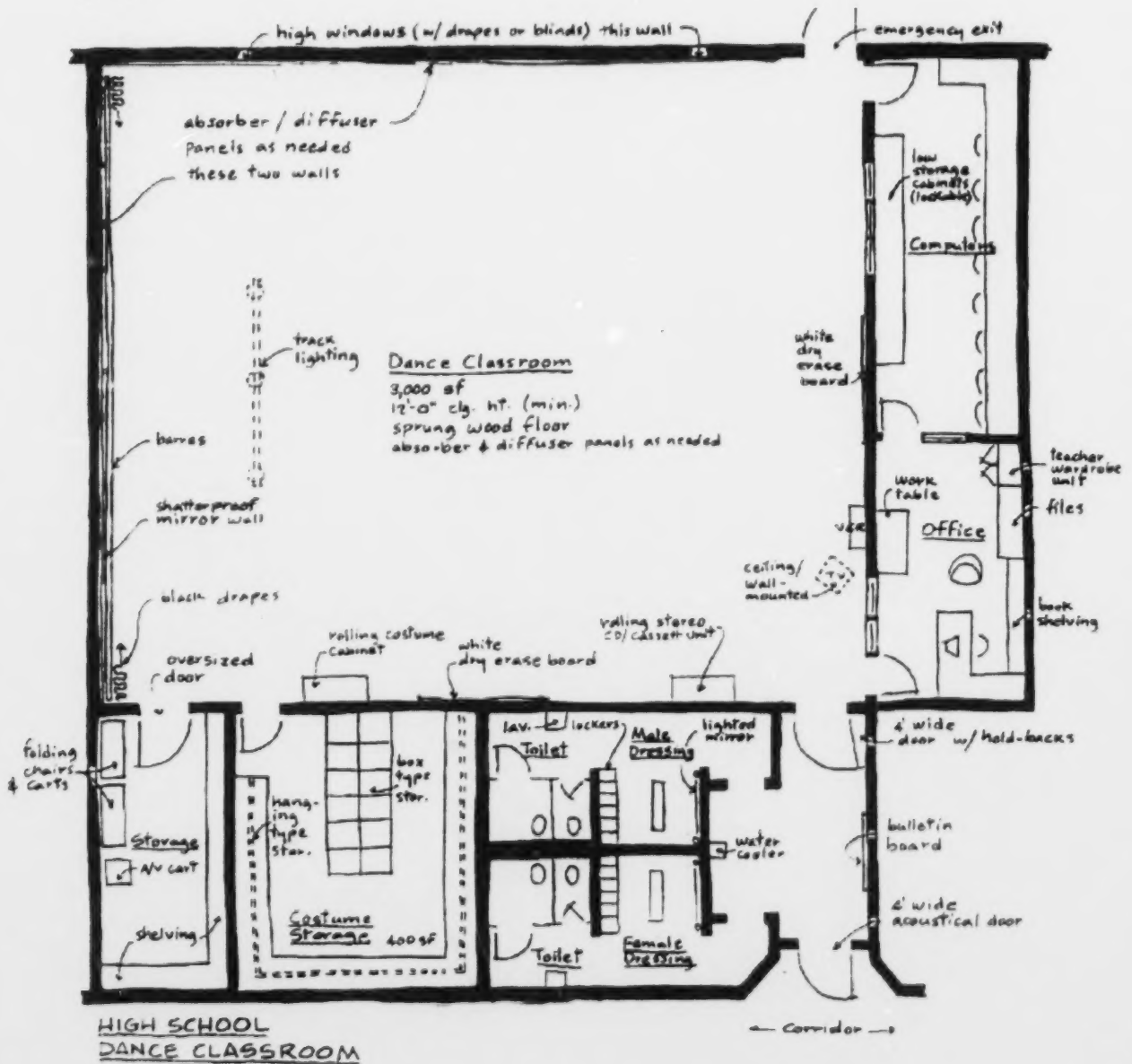
EQUIPMENT

1. Proper equipment in the music suite will help to ensure a successful, functional, and durable music environment and should be considered a long-term investment.
2. Chairs designed specifically for music posture help the student produce better tone and thus become better musicians.
3. Chairs should be stackable for easy storage. Chair carts make it easier to transport chairs between classroom and performance areas.
4. Music stands should be sturdy and designed to withstand heavy use. Stand carts make it easier to move stands between classroom and performance areas.
5. Portable risers permit greater adaptability to program changes and don't reduce cubic volume or adversely affect acoustics like concrete risers. Flat floors facilitate handicapped accessibility and offer the greatest space flexibility.
6. Flexibility should be a key to equipment selection. Products should adapt easily to changes in the music environment.

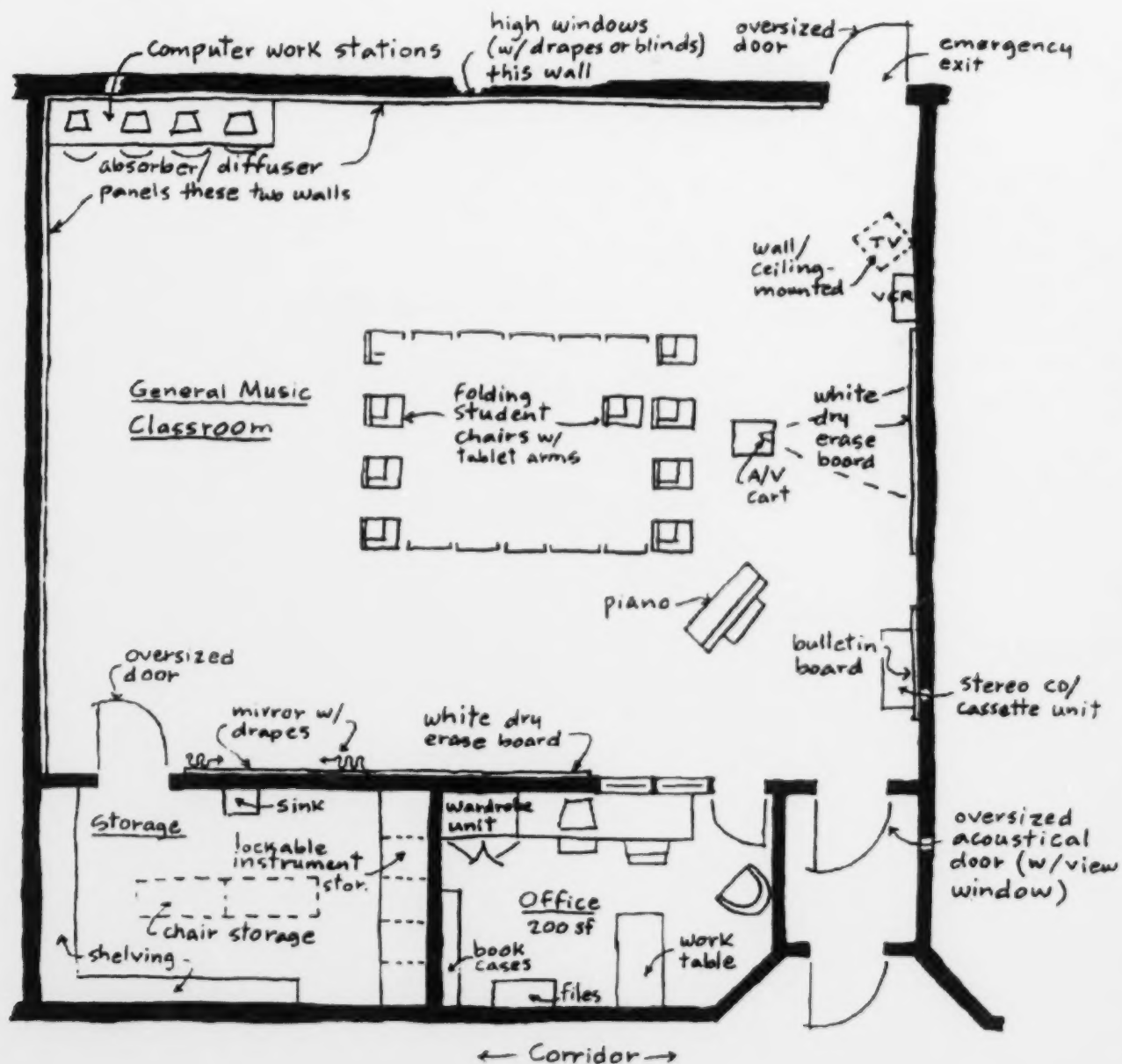
SAMPLE PLANS

SAMPLE PLAN: Dance

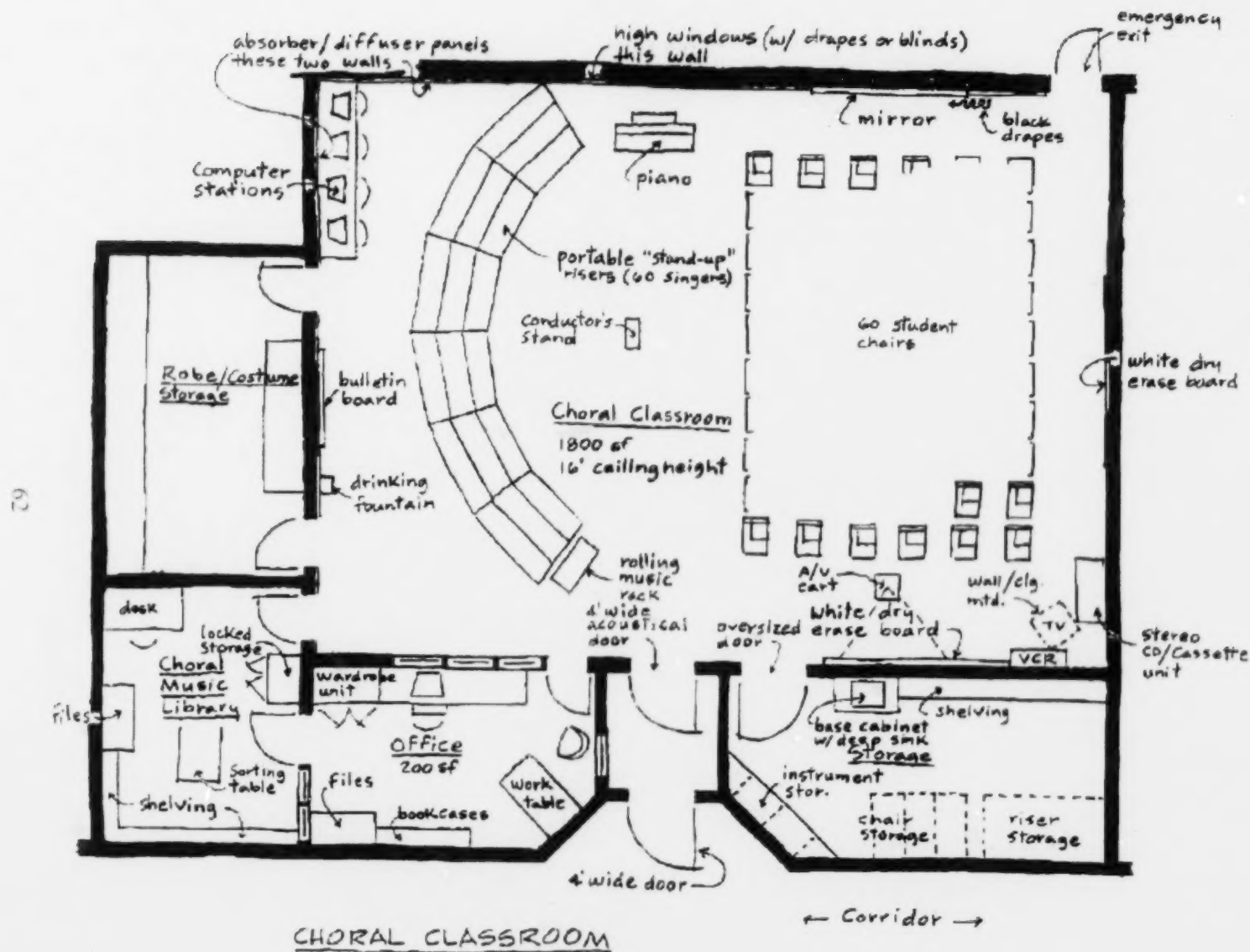
The sample plan below illustrates a magnet or performing arts school dance facility. Elements within the plan are representative of a typical high school dance facility. Local planners should determine the actual scope of a facility that can best meet the objectives of the local education agency.



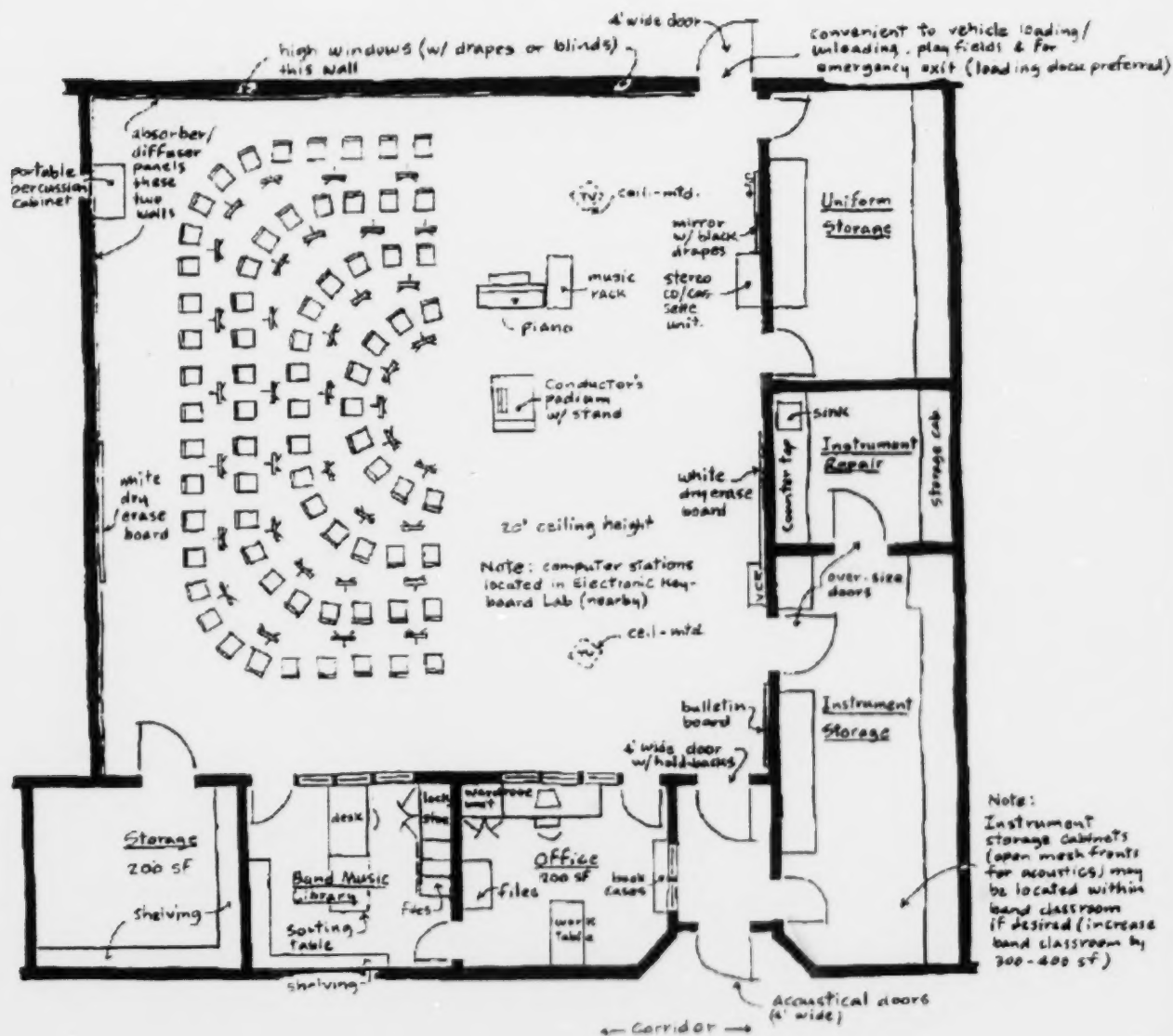
SAMPLE PLAN: General Music



GENERAL MUSIC CLASSROOM

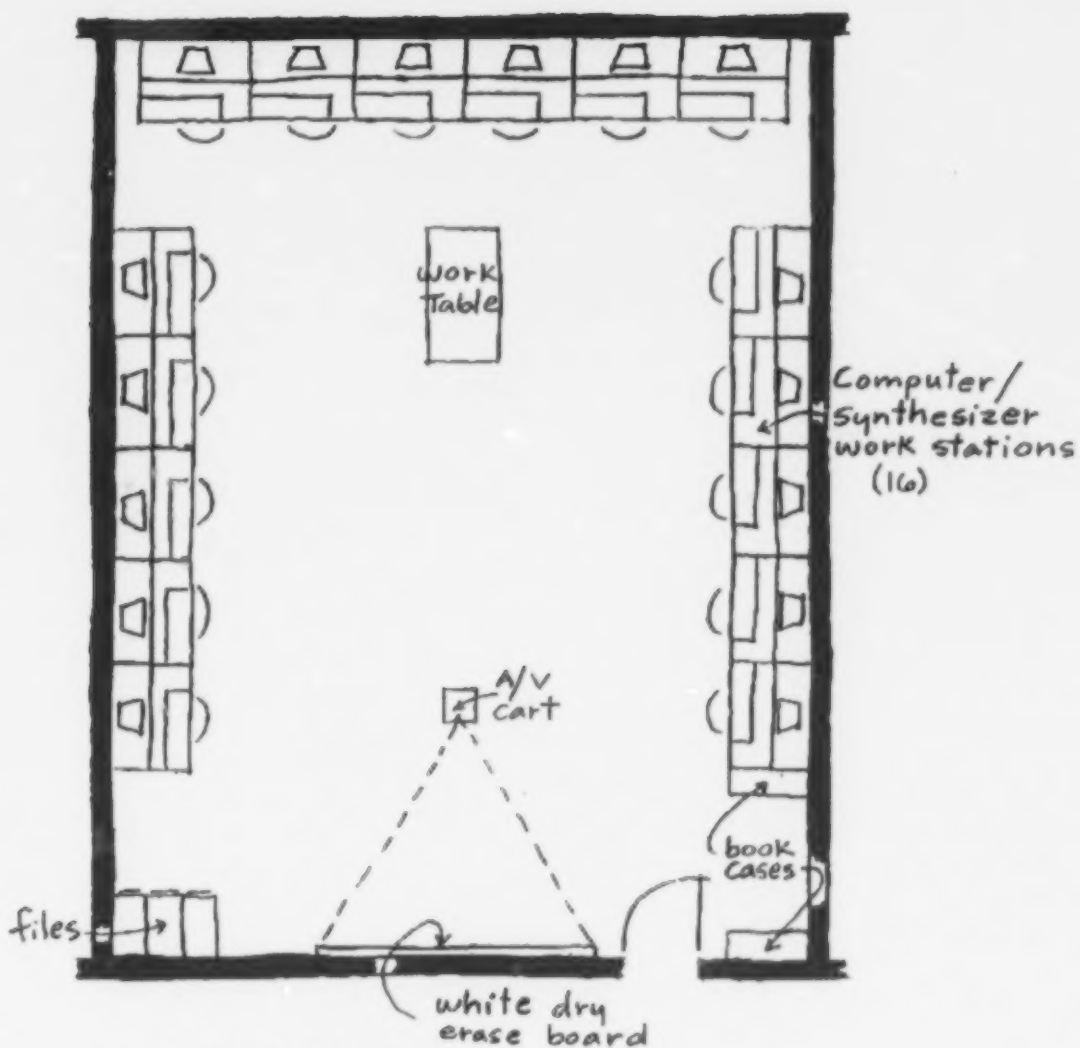


SAMPLE PLAN: Band or Orchestra



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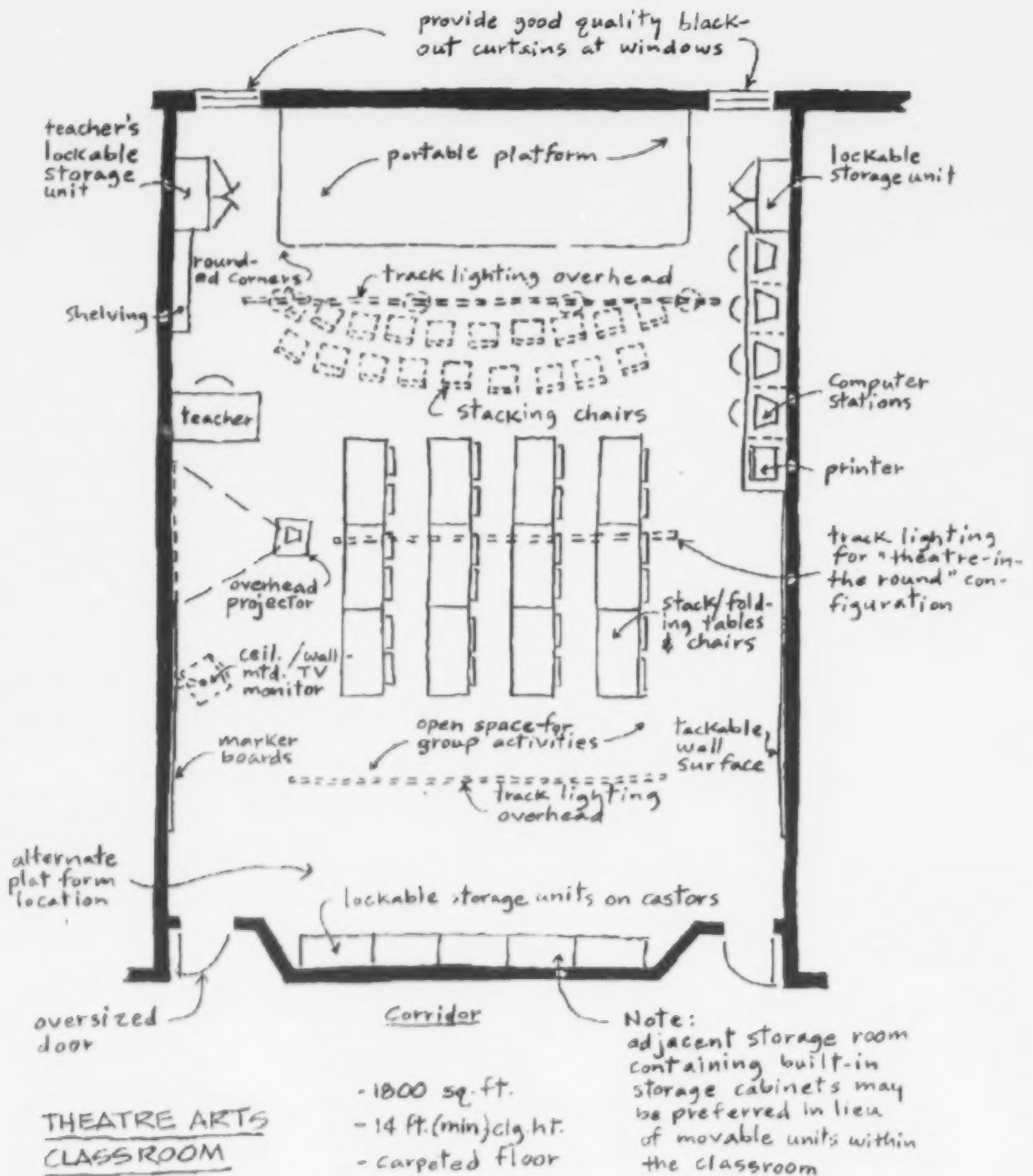
SAMPLE PLAN: Electronic Keyboard Lab



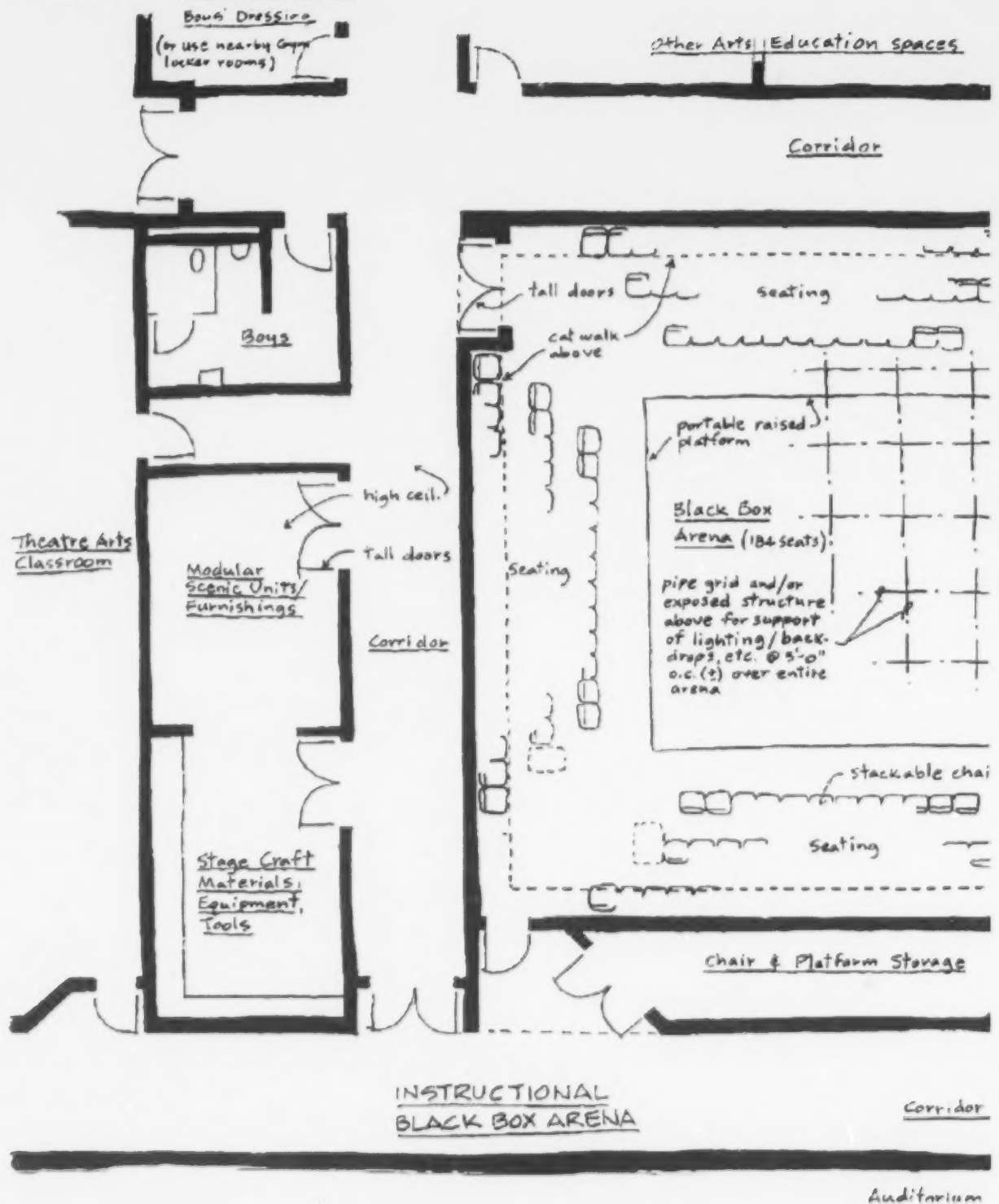
ELECTRONIC
KEYBOARD LAB

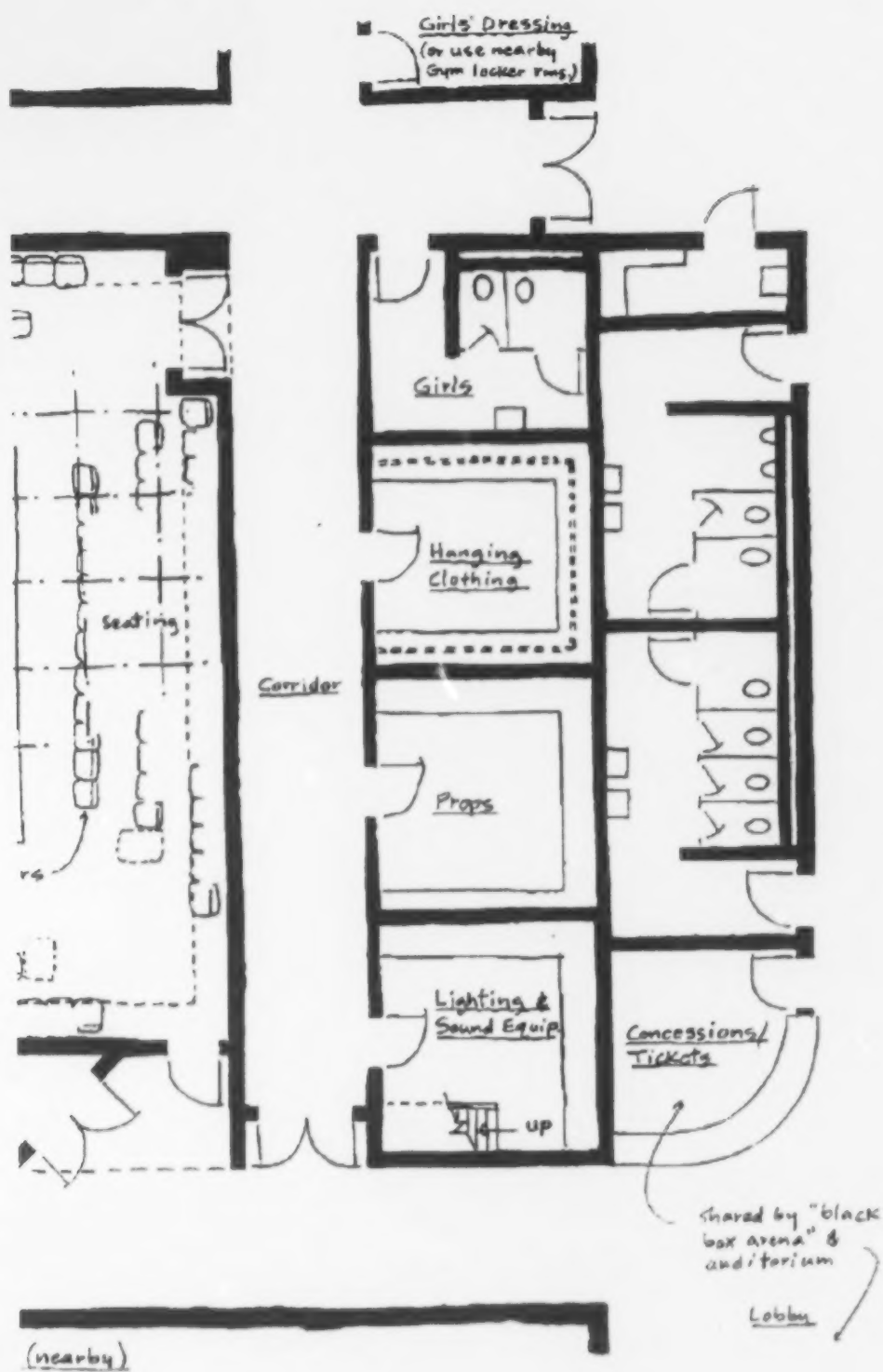
844 sf

SAMPLE PLAN: Theatre Classroom

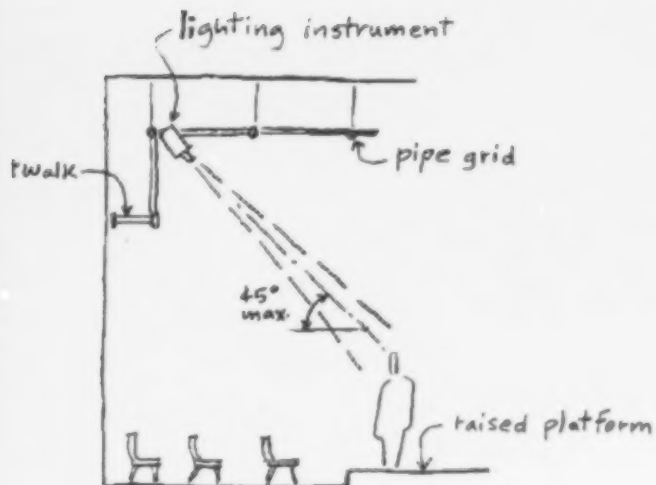


SAMPLE PLAN: Black Box Arena

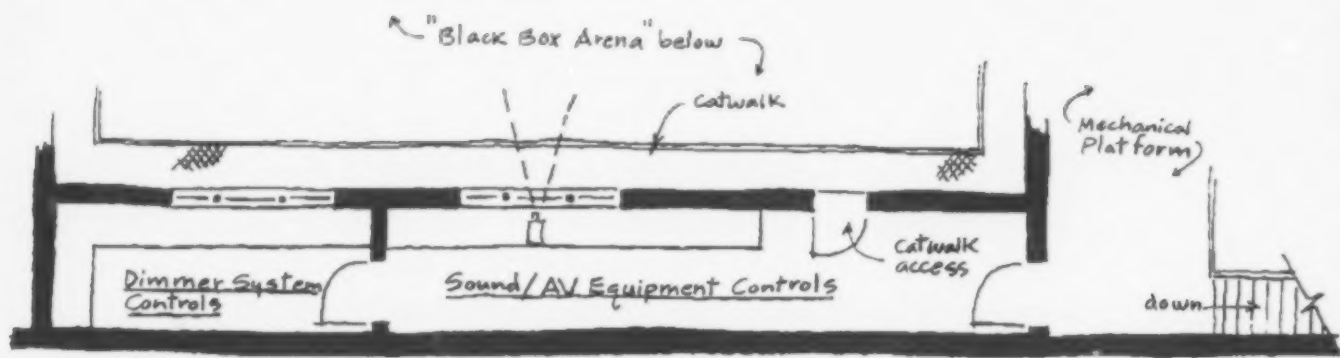




Upper Level: Black Box Arena

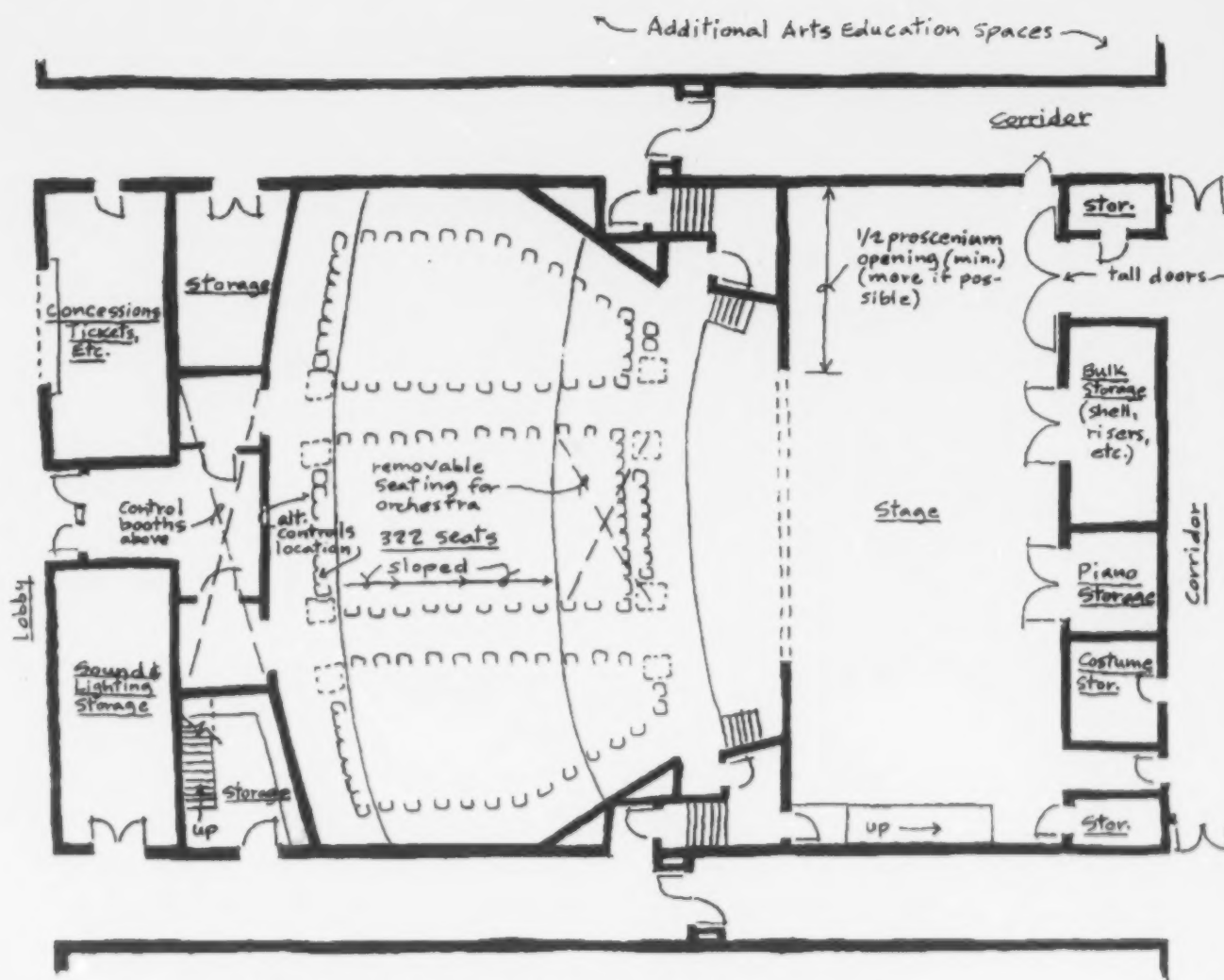


SECTION



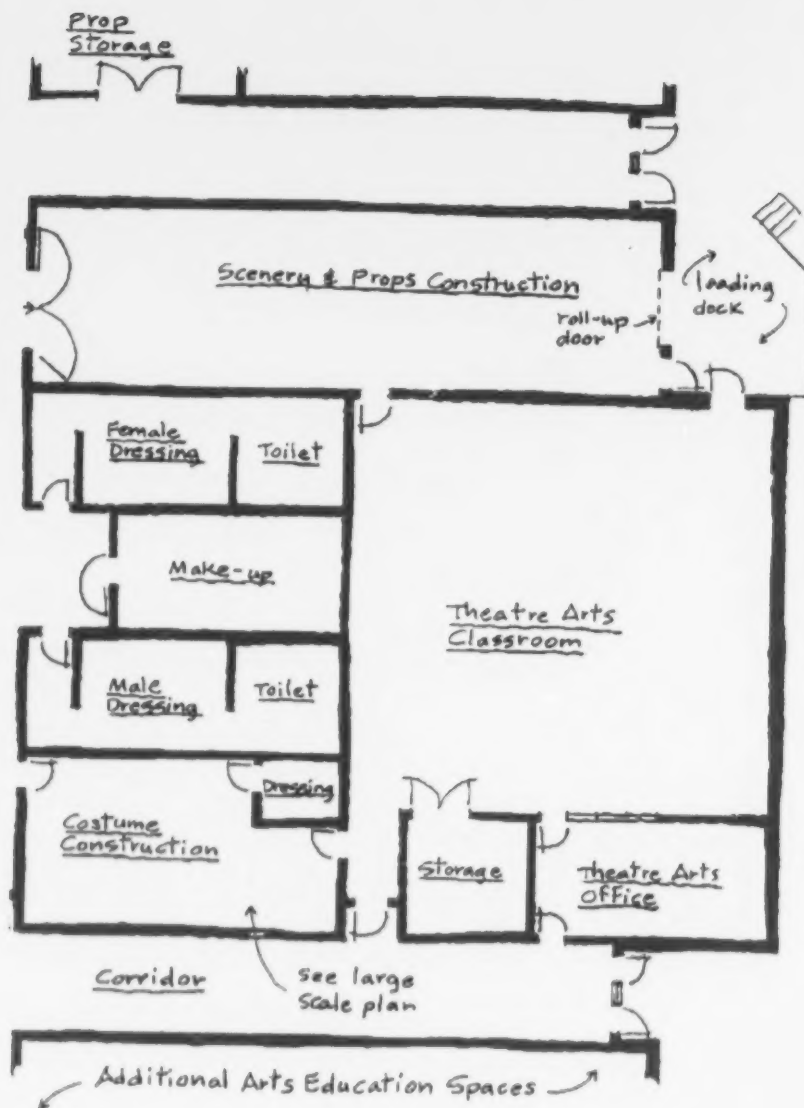
UPPER LEVEL • BLACK BOX ARENA

SAMPLE PLAN: Laboratory/Auditorium



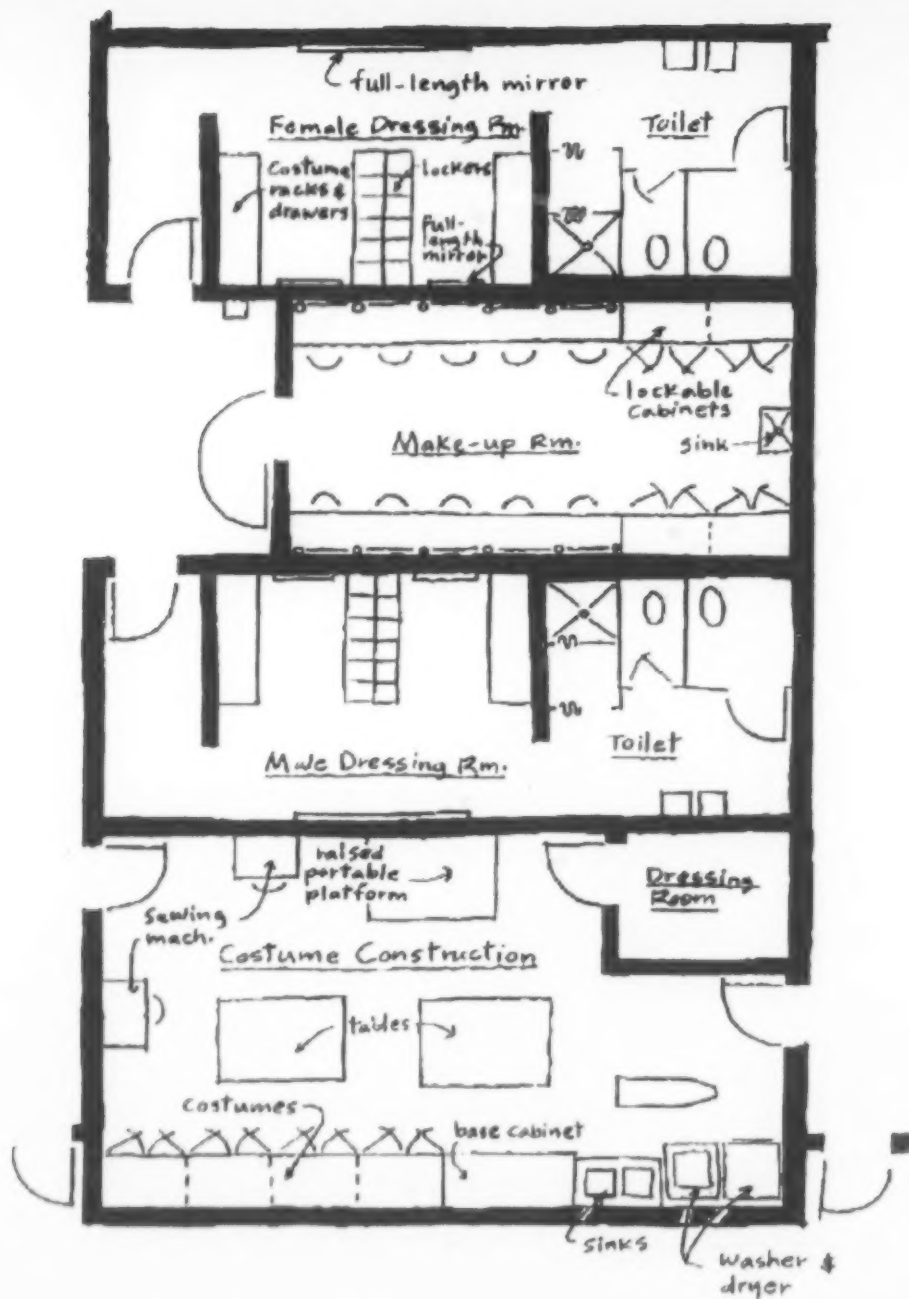
THEATRE ARTS LABORATORY/AUDITORIUM

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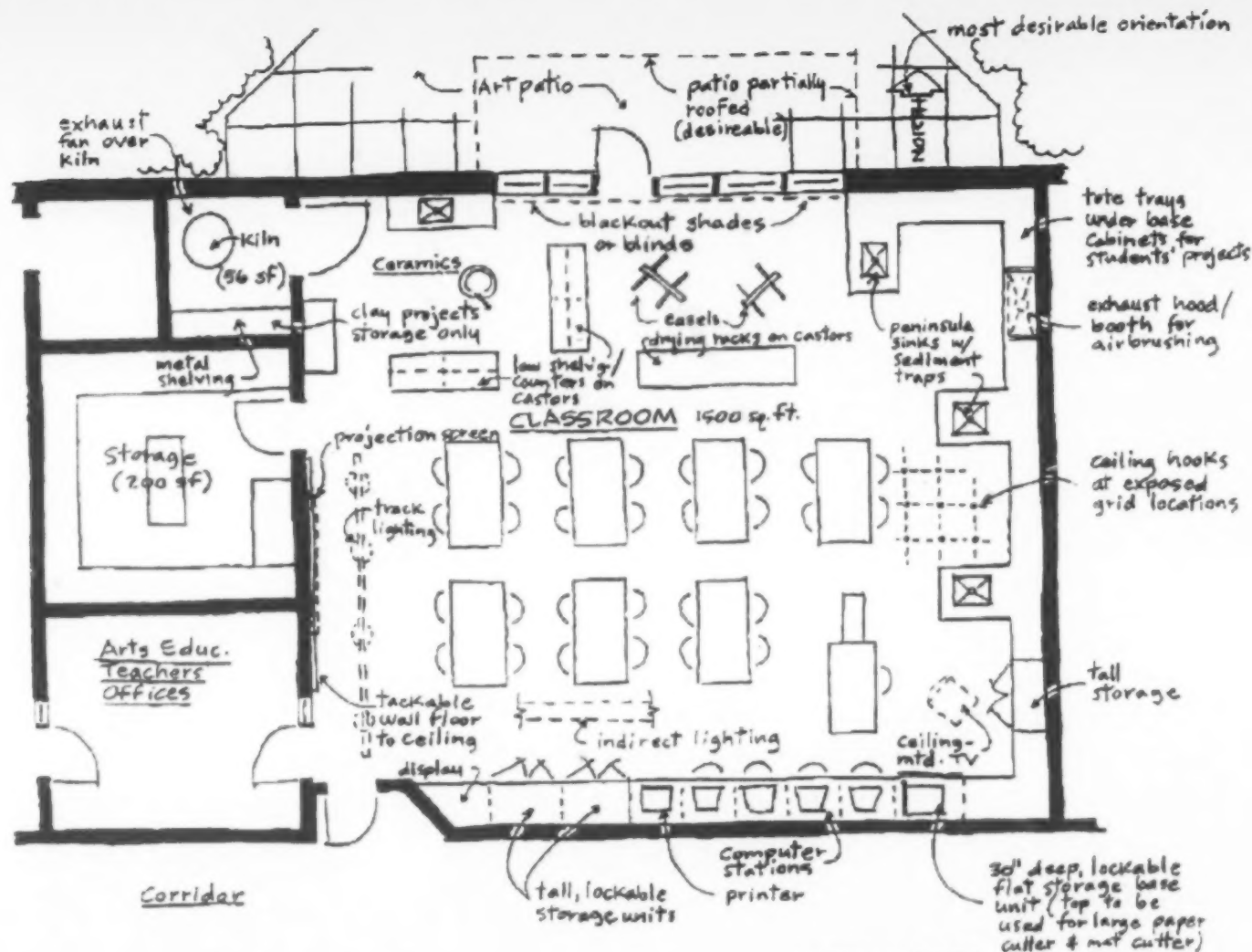


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Enlarged Plan: Theatre Arts Support Spaces

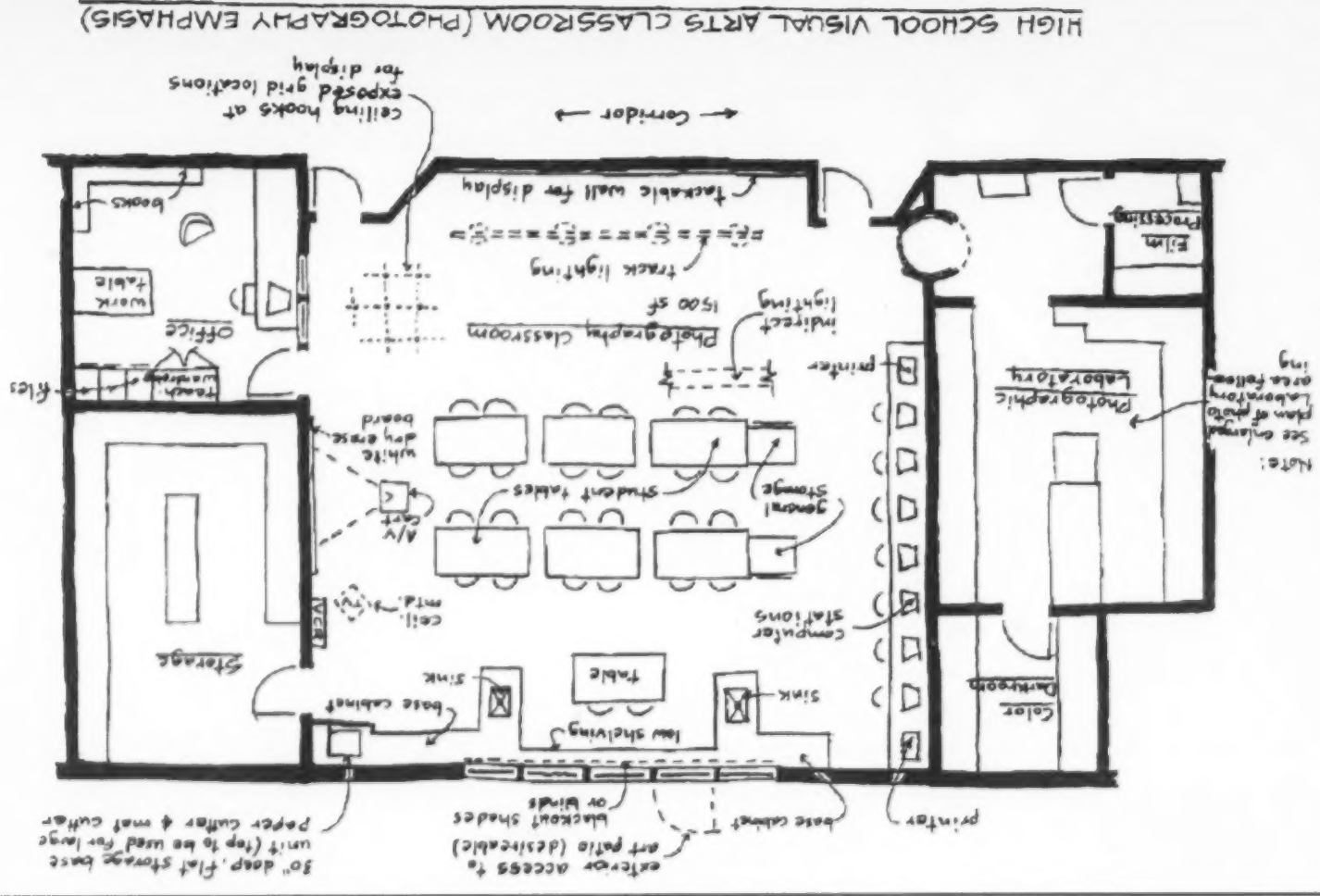


ENLARGED PLAN
THEATRE ARTS SUPPORT SPACES

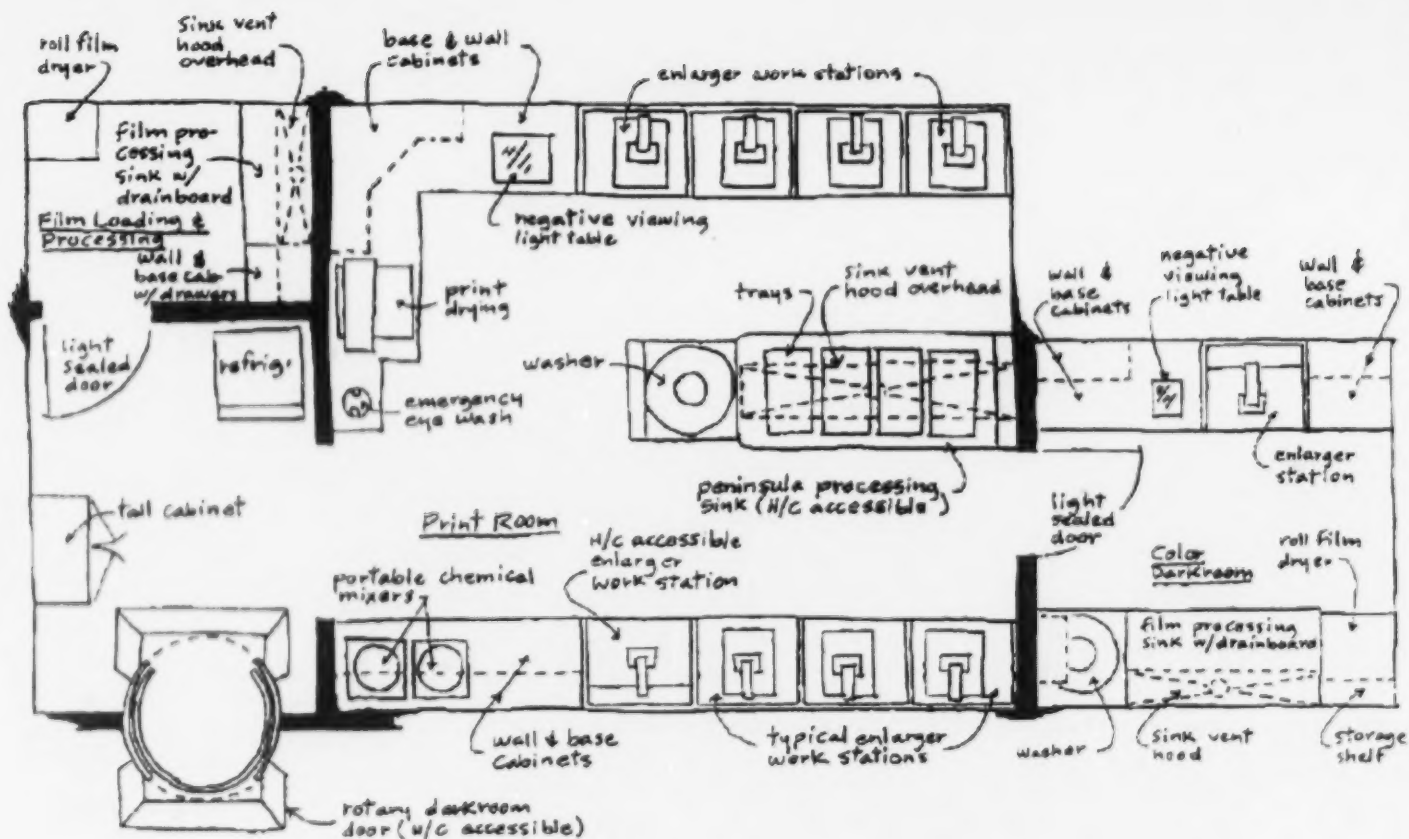


- 10 ft. (min) ceil. ht.
- vinyl composition tile floor

VISUAL ARTS



75



HIGH SCHOOL PHOTOGRAPHIC LABORATORY

Courtesy Glendave, Inc.

ADDITIONAL RESOURCES

Design Standards for School Art Facilities, 1994, National Arts Education Association, Reston, VA.

Facilities for Arts Education, 1991, North Carolina Department of Public Instruction, Raleigh, NC.

Music Facilities: Building, Equipping, and Renovating, Geerdes, Harold P., Music Educators National Conference, 1987, Reston, VA.

North Carolina Public Schools Facilities Guidelines, 1999, North Carolina Department of Public Instruction, Raleigh, NC.

Opportunity-to-Learn Standards for Arts Education, 1995, Consortium of National Arts Education Associations, National Dance Association, Reston, VA.

Planning Guide for Secondary School Music Facilities, 1997, Wenger Corporation, Owatonna, MN.

Teacher Handbook: Arts Education K-12, 1995, North Carolina Department of Public Instruction, Raleigh, NC.